Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

Final

AIR QUALITY PERMIT

Issued under 401 KAR 52:020

Permittee Name:	**AK Steel Corporation**
Mailing Address:	**P.O BOX 191, Ashland, Kentucky 41105-0191**
Source Name:	**AK Steel-Ashland Works-Coke Plant**
Mailing Address:	**400 East Winchester Avenue Ashland, Kentucky 41105-0191**
Source Location:	**Ashland, Kentucky 41105-0191**
Permit ID:	**V-07-036**
Agency Interest #:	**43192**
Activity ID:	**APE20040001**
Review Type:	**Title V, Operating**
Source ID:	**21-019-00027**
Regional Office:	**Ashland Regional Office 1550 Wolohan Drive, Suite 1 Ashland, KY 41102 (606) 929-5285**
County:	**Boyd**
Application Complete Date:	**August 15, 2006**
Issuance Date:	**June 16, 2008**
Revision Date:	
Expiration Date:	**June 16, 2013**

John S. Lyons, Director
Division for Air Quality

Revised 09/29/06

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	Permit type	**Log or Activity#**	**Complete Date**	**Issuance Date**	**Summary of Action**
V-07-036	**Initial Issuance**	**APE20040001**	**8/15/2006**	**6/16/2008**	**Initial Operating Permit**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

01 (01) Railcar Unloading
Description: Unloading of coal from railcars to Coal Mixing
Date constructed: 1977
Maximum input: 350 tons/hr
Controls: Dust Suppressant provided by vendor

APPLICABLE REGULATIONS:
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality
401 KAR 63:010, Fugitive Emissions

1. Operating Limitations:
a. Pursuant to a BACT determination made final on June 8, 1977, AK Steel shall use wet suppression or hoods, fans, or fabric filters to control fugitive dust.
b. Throughput shall not exceed 1,665,000 tons of coal per year for Batteries #3 and #4.

Compliance Demonstration Method: Compliance will be determined by visible emissions testing.

2. Emission Limitations:
a. There shall be no visible fugitive dust emissions beyond the lot line of the property on which the emissions originated. [401 KAR 63:010 (3)(2), Standards for Fugitive Emissions]
Railcar Unloading For Battery # 4 (Pursuant to the BACT determination):
b. There shall be no particulate emissions to the atmosphere with an opacity which exceeds 5 percent.
The particulate emissions shall not exceed:
c. 40.9 lbs/hr
d. 0.196 lbs/ ton of dry coal processed
The throughput shall not exceed:
e. 990,000 tons of coal per year
f. 210 tons of coal per hour

Compliance Demonstration Method: Compliance with opacity will be determined by visible emissions testing, in accordance with EPA Method 9. Particulate emissions shall be considered to meet limitations above when the **Operating Limitations** is being applied and compliance with opacity has been demonstrated.

3. Testing Requirements: None

4. Specific Monitoring Requirements:
The permittee shall monitor and maintain records of the following information:
a. Once per week, during representative normal operating conditions of the unloading operation, the permittee shall survey the emission unit, for visible emissions and maintain a log of the observations.
b. If visible emissions are observed, the permittee shall perform a Method 9 reading. The opacity observed shall be recorded in the weekly log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

5. Specific Record keeping Requirements:
AK Steel shall retain weekly records of the Method 9 opacity observations for five years [401 KAR 52:020, Section 10]

6. Specific Reporting Requirements:
AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

02 (02) Coal Storage Piles
Description: Truck unloading
Date constructed: 1969
Controls: Dust Suppressant

APPLICABLE REGULATIONS:
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality
401 KAR 63:010, Fugitive Emissions

1. **Operating Limitations:**
Pursuant to a BACT determination made final on June 8, 1977, AK Steel shall use wet suppression to control fugitive dust.

Compliance Demonstration Method: Compliance will be determined by visible emissions testing.

2. **Emission Limitations:**
a. There shall be no visible fugitive dust emissions beyond the lot line of the property on which the emissions originated. [401 KAR 63:010 (3)(2), Standards for Fugitive Emissions]
Coal Storage Piles For Battery # 4 (Pursuant to the BACT determination):
b. There shall be no particulate emissions to the atmosphere with an opacity which exceeds 5 percent.
The particulate emissions shall not exceed:
c. 3.05 lbs/hr
d. 0.027 lbs/ ton of dry coal processed

Compliance Demonstration Method: Compliance with opacity will be determined by visible emissions testing, in accordance with EPA Method 9. Particulate emissions shall be considered to meet limitations above when the **Operating Limitations** is being applied and compliance with opacity has been demonstrated.

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:**
The permittee shall monitor and maintain records of the following information:
a. Once per week, during representative normal operating conditions of the truck unloading and coal storage operation, the permittee shall survey the emission unit, for visible emissions and maintain a log of the observations.
b. If visible emissions are observed, the permittee shall perform a Method 9 reading. The opacity observed shall be recorded in the weekly log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

5. **Specific Record keeping Requirements:**
AK Steel shall retain weekly records of the EPA Method 9 opacity observations for five years [401 KAR 52:020, Section 10]

6. **Specific Reporting Requirements:**
AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

03 (03) **Coal Mix Bins**
Description: Mixing of coal to proper blend for coking
Date constructed: 1969
Controls: Dust Suppressant

APPLICABLE REGULATIONS:
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality
401 KAR 61:020, Existing Process Operations

1. **Operating Limitations:**
Pursuant to a BACT determination made final on June 8, 1977, AK Steel shall use wet suppression to control fugitive dust.
Compliance Demonstration Method: Compliance will be determined by visible emissions testing.

2. **Emission Limitations:**
a. There shall be no fugitive emissions greater than or equal to 20% opacity or visible beyond the lot line of the property. [401 KAR 61:020 (3)(1)(b), Standard for Particulate Matter]
Coal Mix Bins For Battery # 4 (Pursuant to the BACT determination):
b. There shall be no particulate emissions to the atmosphere with an opacity which exceeds 5 percent.
The particulate emissions shall not exceed:
c. 13.12 lbs/hr
d. 0.055 lbs/ ton of dry coal processed
The throughput shall not exceed:
e. 990,000 tons of coal per year
f. 210 tons of coal per hour

Compliance Demonstration Method: Compliance with opacity will be determined by visible emissions testing, in accordance with EPA Method 9. Particulate emissions shall be considered to meet limitations above when the **Operating Limitations** is being applied and compliance with opacity has been demonstrated.

3. **Testing Requirements:**
Upon request by Division personnel, the permittee shall perform a Method 9 test according to 401 KAR 61:020 (4)(5), Test Methods and Procedures.

4. **Specific Monitoring Requirements:**
The permittee shall monitor and maintain records of the following information:
a. Once per week, during representative, normal operating conditions of mixing operation, the permittee shall survey the emission unit, for visible emissions and maintain a log of the observations.
b. If visible emissions are observed, the permittee shall perform a Method 9 reading. The opacity observed shall be recorded in the weekly log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

5. **Specific Record keeping Requirements:**
AK Steel shall retain weekly records of the EPA Method 9 opacity observations for five years [401 KAR 52:020, Section 10]

6. **Specific Reporting Requirements:**
AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

04 (04) **Coal Crushing and associated handling**
Description: Crushing of coal to proper size for coking, conveying, and transfer points
Date constructed: 1975
Controls: Dust Suppressant

APPLICABLE REGULATIONS:
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality
401 KAR 59:010, New Process Operations
40 CFR Part 60, Subpart Y, Standards of Performance for Coal Preparation Plants

1. **Operating Limitations:**
Pursuant to a BACT determination made final on June 8, 1977, AK Steel shall use wet suppression or hoods, fans, or fabric filters to control fugitive dust.

Compliance Demonstration Method: Compliance will be determined by visible emissions testing.

2. **Emission Limitations:**
a. There shall be no fugitive emissions greater than or equal to 20% opacity or visible beyond the lot line of the property. [401 KAR 59:010 (3)(1)(b), Standard for Particulate Matter]
b. The permitte shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater. [40 CFR 60.252 (c), Standards for particulate matter]
Coal Crushing and associated handling For Battery # 4 (Pursuant to the BACT determination):
c. There shall be no particulate emissions to the atmosphere with an opacity which exceeds 5 percent.
The particulate emissions shall not exceed:
d. 1.8 lbs/hr
e. 0.0086 lbs/ ton of coal processed
The throughput shall not exceed:
f. 990,000 tons of coal per year
g 210 tons of coal per hour

Compliance Demonstration Method: Compliance with opacity will be determined by visible emissions testing, in accordance with EPA Method 9. Particulate emissions shall be considered to meet emission limitation above when appropriate use of dust suppressant is being applied and compliance with opacity has been demonstrated.

3. **Testing Requirements:**
Upon request by Division personnel, the permittee shall perform a Method 9 test according to 40 CFR Part 60, § 60.254, Test Methods and Procedures.

4. **Specific Monitoring Requirements:**
AK Steel shall monitor visible emissions on a monthly basis using U.S. EPA Reference Method 9.
[401 KAR 52:020, Section 10]:

5. **Specific Record keeping Requirements:**
AK Steel shall retain records of monthly opacity observations for five years [401 KAR 52:020, Section 10].

6. **Specific Reporting Requirements:**
AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.

7. **Specific Control Equipment Operating Conditions:**
AK Steel shall monitor the use of dust suppressant.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

05 (05) Coal Bins
Description: Storage of mixed, crushed coal for charging into coking ovens
Date constructed: 1969
Controls: Dust Suppressant applied at 04 Coal Crushing

APPLICABLE REGULATIONS:
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality
401 KAR 61:020, Existing Process Operations

1. **Operating Limitations:**
Pursuant to a BACT determination made final on June 8, 1977, AK Steel shall use wet suppression to control fugitive dust.
Compliance Demonstration Method: Compliance will be determined by visible emissions testing.

2. **Emission Limitations:**
a. There shall be no fugitive emissions greater than or equal to 20% opacity or visible beyond the lot line of the property. [401 KAR 61:020 (3)(1)(b), Standard for Particulate Matter]
Coal Bins For Battery # 4 (Pursuant to the BACT determination):
b. There shall be no particulate emissions to the atmosphere with an opacity which exceeds 5 percent.
The particulate emissions shall not exceed:
c. 45.71 lbs/hr
d. 0.219 lbs/ ton of coal processed
The throughput shall not exceed:
e. 990,000 tons of coal per year
f. 210 tons of coal per hour

Compliance Demonstration Method: Compliance with opacity will be determined by visible emissions testing, in accordance with EPA Method 9. Particulate emissions shall be considered to meet limitations above when the **Operating Limitations** is being applied and compliance with opacity has been demonstrated.

3. **Testing Requirements:**
Upon request by Division personnel, AK Steel shall perform a Method 9 test according to 401 KAR 61:020 (4)(5), Test Methods and Procedures.

4. **Specific Monitoring Requirements**:
The permittee shall monitor and maintain records of the following information:
a. Once per week, during representative, normal operating conditions of coal bins and associated handling, conveying, and transfer points, the permittee shall survey the emission unit, for visible emissions and maintain a log of the observations.
b. If visible emissions are observed, the permittee shall perform a Method 9 reading. The opacity observed shall be recorded in the weekly log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

5. **Specific Record keeping Requirements:**
AK Steel shall retain weekly records of the EPA Method 9 opacity observations for five years [401 KAR 52:020, Section 10]

6. **Specific Reporting Requirements:**
AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

06 (06) **No. 3 Battery Charging**
Description: Emissions during charging of crushed coal into oven charging ports
MACT compliance track
Date constructed: 1969
Controls: Staged Charging

APPLICABLE REGULATIONS:
40 CFR 63, Subpart L, National Emission Standards for Coke Oven Batteries
401 KAR 61:140, Existing By-Product Coke Manufacturing Plants
NON APPLICABLE REGULATIONS:
401 KAR 61:020, Existing Process Operations does not apply to the particulate emissions as this unit is subject to another emission standard with respect to particulates in 401 KAR Chapter 61.

1. Operating Limitations:
a. AK Steel shall comply with all requirements in Condition 4 under Section D for coke oven battery startups, shutdowns, and malfunctions.
b. AK Steel shall comply with all requirements in Condition 5 under Section D for work practice standards.

Compliance Demonstration Method:
Compliance will be determined by a review of records and inspections. [40 CFR 63.309 (e)] and [40 CFR 63.309 (f)]

2. Emission Limitations:
a. There shall be no visible emissions of more than 12 seconds per charge on a 30-day rolling logarithmic average. [40 CFR 63.302 (a)(3)(v), Standards for Byproduct Coke Oven Batteries]
b. The emission limitations shall apply at all times except during a period of startup, shutdown, or malfunction. The startup period shall not exceed 180 days. [40 CFR 63.300 (e)]

Compliance Demonstration Method:
Compliance will be determined by Method 303 inspections and calculations using a logarithmic average.

c. No visible emissions during the charging cycle from the control equipment, the charging ports, the larry cars or the open chuck door, except for an average of twenty-five (25) seconds of any visible emissions (excluding water vapor) per charge, averaged over five (5) consecutive charges. [Pursuant to 401 KAR 61:140 (3)(1), Standards for Particulate Matter]

Compliance Demonstration Method:
Compliance is assumed by compliance with the 40 CFR 63.302 emission limitation.

3. Testing Requirements
a. There shall be daily (7 days per week) performance tests in accordance with Method 303 in Appendix A of Part 63. [40 CFR 63.309 (a)]
b. A certified observer shall conduct 5 runs each day to observe and record the seconds of visible emissions per charge for 5 consecutive charges from Battery 3. The observer may perform additional runs as needed to obtain and record a visible emissions set of values for an emission point that is valid under Method 303. Observations from fewer than 5 consecutive charges shall constitute a valid set of charging observations only in accordance with procedures and conditions specified in sections 3.8 and 3.9 of Method 303. [40 CFR 63.309 (c)(1)]

4. Specific Monitoring Requirements:
AK Steel shall comply with all applicable methods and procedures for monitoring visible emissions in 40 CFR 63.309, Performance Tests and Procedures:
a. See Condition 3. under Section D.
b. After each performance test, the certified observer shall check and record the collecting main pressure according to the procedure in section 6.3 of Method 303 in Appendix A to this subpart. AK Coke shall demonstrate

SECTION B -EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

pursuant to Method 303 in Appendix A to this subpart the accuracy of pressure measurement device upon request of the certified observer and shall not adjust the pressure to a level below the range of normal operation during or prior the inspection. [40 CFR 63.309 (c)(3)]

c. If a valid visible emissions set of values is not obtained for a performance test, there is no compliance determination for that day. Compliance determinations will resume on the next day that a valid visible emissions set of values is obtained. [40 CFR 63.309 (c)(2)]
d. The certified observer shall make available to the Division and AK Steel a copy of the daily inspection results by the end of the day. This information is not a compliance determination. [40 CFR 63.309 (e)]
e. The certified observer shall make available to AK Steel the calculated rolling average as soon as practicable following each performance test. This information is not a compliance determination. [40 CFR 63.309 (e)]
f. The Division or their designatee shall compute and record (in accordance with Method 303), at least once monthly, the logarithmic 30-day rolling average(s) of seconds of visible emissions per charge for Battery 3 (using the equation in section 3.9 of Method 303) from the observations obtained from each performance test for each day of operations on which a valid set of emissions values is obtained. [40 CFR 63.309 (d)]

5. Specific Record keeping Requirements:

a. See Condition 4 under Section D for required coke oven battery startup, shutdown, and malfunction records.
b. See Condition 5 under Section D for required work practice records.
c. See Condition 6 under Section D for 40 CFR 63.311 records retention time period.
d. See Condition 7 under Section D for the work practice and startup, shutdown, malfunction plans.
e. Records demonstrating the performance of work practice requirements according to 40 CFR 63.306(b)(7).

6. Specific Reporting Requirements:

a. AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.
b. See Condition 4 under Section D for submitting written coke oven battery startup, shutdown, and malfunction reports.
c. See Condition 8 under Section D for submitting 40 CFR 63.311 reports.

7. Specific Control Equipment Operating Conditions:

None

8. Compliance Certification Requirements:

See Condition 9. under Section D.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

07 (07)	**No. 3 Battery Topside**
Description:	Leaks from charging ports and offtake systems during coking process MACT compliance track
Date constructed:	1969
Controls:	Enhanced Operation and Maintenance Practices

APPLICABLE REGULATIONS:
40 CFR 63, Subpart L, National Emission Standards for Coke Oven Batteries
40 CFR 63, Subpart CCCCC, National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks
401 KAR 61:140, Existing By-Product Coke Manufacturing Plants
NON APPLICABLE REGULATIONS:
401 KAR 61:020, Existing Process Operations does not apply to the particulate emissions as this unit is subject to another emission standard with respect to particulates in 401 KAR Chapter 61.

1. Operating Limitations:

a. AK Steel shall not adjust the collection main pressure to a level below the range of normal operation during or prior to the collecting main leak inspection and pressure check. [40 CFR 63:309 (c)(3)(ii)]

b. AK Steel shall comply with all requirements in Condition 4. under Section D for coke oven battery startups, shutdowns, and malfunctions.

c. AK Steel shall comply with all requirements in Condition 5. under Section D for work practice standards.

Compliance Demonstration Method:
Compliance will be determined by a review of records and inspections. [40 CFR 63.309 (e)] and [40 CFR 63.309 (f)]
Compliance will be determined by a review of records, work practice plans and inspections. [40 CFR 63.309 (e) and 40 CFR 63.7327 (d)]

2. Emission Limitations:

a. There shall be not more than 0.4% leaking topside port lids (charging ports), as determined by the procedures in §63.309 (d)(1). [40 CFR 63.302 (a)(3)(iii)]

Compliance Demonstration Method:
Compliance will be determined by Method 303 inspections and calculations.

b. No more than five (5) percent of the charging ports and ten (10) percent of the standpipes on operating ovens shall be leaking (exhibiting visible emissions except for steam or non-smoking flame) at any time. [401 KAR 61:140 (3)(2)]

Compliance Demonstration Method:
Compliance is assumed by compliance with the 40 CFR 63.302 emission limitation.

c. There shall be not more than 2.5% leaking offtake systems, as determined by the procedures in §63.309 (d)(1). [40 CFR 63.302 (a)(3)(iv)]

Compliance Demonstration Method:
Compliance will be determined by Method 303 inspections and calculations

3. Testing Requirements:

There shall be daily (7 days per week) performance tests in accordance with Method 303 in Appendix A of Part 63. [40 CFR 63.309 (a)]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

AK Steel shall comply with all applicable methods and procedures for monitoring topside leaks in 40 CFR 63.309, Performance Tests and Procedures:

a. See Condition 3. under Section D.
b. A certified observer shall conduct 1 run each day to observe and record visible emissions from each topside port lid and offtake system on Battery 3. The observer may perform additional runs as needed to obtain and record a visible emissions value for an emission point that is valid under Method 303. [40 CFR 63.309 (c)(1)]
c. If a valid visible emissions value is not obtained for a performance test, there is no compliance determination for that day. Compliance determinations will resume on the next day that a valid visible emissions value is obtained. [40 CFR 63.309 (c)(2)]
d. After each performance test, the certified observer shall check the collecting main pressure and record the data required by section 6.3 of Method 303. [40 CFR 63.309 (c)(3)]
e. The certified observer shall make available to the Division and AK Steel a copy of the daily inspection results by the end of the day. This information is not a compliance determination. [40 CFR 63.309 (e)]
f. The certified observer shall make available to AK Steel the calculated rolling average as soon as practicable following each performance test. This information is not a compliance determination. [40 CFR 63.309 (e)]
g. The Division or their designee shall compute and record (in accordance with Method 303), at least once monthly, the 30-run rolling average of % leaking topside port lids and % leaking offtake systems on Battery 3 (using the equations in sections 4.5.3.2, 5.6.5.2, and 5.6.6.2 of Method 303) from the observations obtained from each performance test for each day of operations on which a valid emissions value is obtained. [40 CFR 63.309 (d)]

For the collecting main:
AK Steel shall comply with all applicable methods and procedures for collecting mains in 40 CFR 63.308, Standards for Collecting Mains:

h. AK Steel shall inspect the collecting main for leaks at least once daily according to Method 303 procedures. The permittee shall follow the requirements of 40 CFR 63.309 (c)(3)(i) and (ii). [40 CFR 63.308 (a)]
i. AK Steel shall temporarily seal a leak as soon as possible within 4 hours after detection. [40 CFR 63.308 (c)]
j. AK Steel shall initiate repairs as soon as possible within 5 calendar days after detection. [40 CFR 63.308 (d)]
k. AK Steel shall complete repairs within 15 days after detection, unless an alternative schedule is approved by the Division. [40 CFR 63.308 (d)]
l. Compliance with the standards for collecting mains shall be determined by the Division based on a review of records and inspections. [40 CFR 63.309 (g)]

For soaking:

m. AK Steel must prepare and operate at all times according to a written work practice plan for soaking. Each plan must include measures and procedures to:

(1) Train topside workers to identify soaking emissions that require corrective actions. [40 CFR 63.7294 (a)(1)]
(2) Damper the oven off the collecting main prior to opening the standpipe cap. [40 CFR 63.7294 (a)(2)]
(3) Determine the cause of soaking emissions that do not ignite automatically, including emissions that result from raw coke oven gas leaking from the collecting main through the damper, and emissions that result from incomplete coking. [40 CFR 63.7294 (a)(3)]
(4) If soaking emissions are caused by leaks from the collecting main, take corrective actions to eliminate the soaking emissions. Corrective actions may include, but are not limited to, reseating the damper, cleaning the flushing liquor piping, using aspiration, putting the oven back on the collecting main, or igniting the emissions. [40 CFR 63.7294 (a)(4)]
(5) If soaking emissions are not caused by leaks from the collecting main, notify a designated responsible party. The responsible party must determine whether the soaking emissions are due to incomplete coking. If incomplete coking is the cause of the soaking emissions, AK Steel must put the oven back on the collecting main until it is completely coked or they must ignite the emissions. [40 CFR 63.7294 (a)(5)]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

For the battery:

n. AK Steel must prepare and operate at all times according to a written operation and maintenance plan for the general operation and maintenance of new or existing by-product coke oven batteries. Each plan must address, at a minimum, the following elements: [40 CFR 63.7300 (b)]

(1) Frequency and method of recording underfiring gas parameters.
(1) Frequency and method of recording battery operating temperature, including measurement of individual flue and cross-wall temperatures.
(2) Procedures to prevent pushing an oven before it is fully coked.
(3) Procedures to prevent overcharging and undercharging of ovens, including measurement of coal moisture, coal bulk density, and procedures for determining volume of coal charged.
(4) Frequency and procedures for inspecting flues, burners, and nozzles.
(5) Schedule and procedures for the daily washing of baffles.

5. Specific Record keeping Requirements:

a. AK Steel shall maintain records of all information required in 40 CFR 63.308 (b), Standards for Collecting Mains.
b. See Condition 4. under Section D for required coke oven battery startup, shutdown, and malfunction records.
c. See Condition 5. under Section D for required work practice records.
d. See Condition 6. under Section D for 40 CFR 63.311 records retention time period.
e. See Condition 7. under Section D for the work practice and startup, shutdown, malfunction plans.
f. AK Steel shall maintain records of all information required in 40 CFR 7334 (d) for the soaking work practice standard.
g. AK Steel shall maintain records of all information required in 40 CFR 63.7335 (a) for the battery operation and maintenance plan.
h. AK Steel shall maintain records specified in § 63.7342 paragraphs (a)(1) through (3).

6. Specific Reporting Requirements:

a. AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with 40 CFR § 63.7341. Also see Section F of this permit.
b. See Condition 4. under Section D for submitting written coke oven battery startup, shutdown, and malfunction reports.
c. See Condition 8. under Section D for submitting 40 CFR 63.311 reports.
d. AK Steel shall submit semiannual compliance reports of all information required in 40 CFR 63.7341 (c) for the soaking work practice standard.
e. AK Steel shall submit semiannual compliance reports of all information required in 40 CFR 63.7341 (c) for the battery operation and maintenance plan.

7. Specific Control Equipment Operating Conditions:

None

8. Compliance Certification Requirements:

See Condition 9. under Section D.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

08 (08)	**No. 3 Battery Doors**
Description:	Leaks from doors during coking process MACT compliance track
Date constructed:	1969
Controls:	Enhanced Operation and Maintenance Practices

APPLICABLE REGULATIONS:
40 CFR 63, Subpart L, National emission standards for coke oven batteries
401 KAR 61:140, Existing By-Product Coke Manufacturing Plants
NON APPLICABLE REGULATIONS:
401 KAR 61:020, Existing Process Operations does not apply to the particulate emissions as this unit is subject to another emission standard with respect to particulates in 401 KAR Chapter 61.

1. Operating Limitations:
a. AK Steel shall comply with all requirements in Condition 4. under Section D for coke oven battery startups, shutdowns, and malfunctions.
b. AK Steel shall comply with all requirements in Condition 5. under Section D for work practice standards.
Compliance Demonstration Method:
Compliance will be determined by a review of records and inspections. [40 CFR 63.309]

2. Emission Limitations:
a. There shall not be more than 3.3% leaking coke oven doors for each short (less than 6 meters) by-product coke oven battery, as determined by the procedures in § 63.309 (d)(1). [40 CFR 63.302 (a)(3)(ii)]

Compliance Demonstration Method:
Compliance will be determined by Method 303 inspections and calculations

b. There shall be no visible emission from doors, except non-smoking flame, from more than ten (10) percent of the total coke oven doors on the battery. [401 KAR 61:140 Section 3(3)]

Compliance Demonstration Method:
Compliance is assumed by compliance with the 40 CFR 63.302 emission limitation.

3. Testing Requirements:
a. There shall be daily (7 days per week) performance tests in accordance with Method 303 in Appendix A of Part 63. [40 CFR 63.309 (a)]
b. A certified observer shall conduct 1 run each day to observe and record visible emissions from each coke oven door on Battery 3. The observer may perform additional runs as needed to obtain and record a visible emissions value for an emission point that is valid under Method 303. In no case shall AK Steel knowingly block a coke oven door, or any portion of a door for the purpose of concealing emissions or preventing observations by the certified observer. [40 CFR 63.309 (c)(1) and (6)]

4. Specific Monitoring Requirements:
AK Steel shall comply with all applicable methods and procedures for monitoring leaking doors in 40 CFR 63.309, Performance Tests and Procedures:
a. See Condition 3. under Section D.
b. If a valid visible emissions value is not obtained for a performance test, there is no compliance determination for that day. Compliance determinations will resume on the next day that a valid visible emissions value is obtained. [40 CFR 63.309 (c)(2)]
c. The certified observer shall make available to the Division and AK Steel a copy of the daily inspection results by the end of the day. This information is not a compliance determination. [40 CFR 63.309 (e)]
d. The certified observer shall make available to AK Steel the calculated rolling average as soon as practicable following each performance test. This information is not a compliance determination. [40 CFR 63.309 (e)]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

e. The Division or their designee shall compute and record (in accordance with Method 303), at least once monthly, the 30-run rolling average of % leaking doors on Battery 3 (using the equations in sections 4.5.3.2, 5.6.5.2, and 5.6.6.2 of Method 303) from the observations obtained from each performance test for each day of operations on which a valid emissions value is obtained. [40 CFR 63.309 (d)]

5. Specific Record keeping Requirements:

a. See Condition 4. under Section D for required coke oven battery startup, shutdown, and malfunction records.
b. See Condition 5. under Section D for required work practice records.
c. See Condition 6. under Section D for 40 CFR 63.311 records retention time period.
d. See Condition 7. under Section D for the work practice and startup, shutdown, malfunction plans.

6. Specific Reporting Requirements:

a. AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.
b. See Condition 4. under Section D for submitting written coke oven battery startup, shutdown, and malfunction reports.
c. See Condition 8. under Section D for submitting 40 CFR 63.311 reports.

7. Specific Control Equipment Operating Conditions: None

8. Compliance Certification Requirements:

See Condition 9. under Section D.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

09 (09)	**No. 3 Battery Underfiring**
Description:	Coke oven heating Combustion stack emissions during coking process
Rated Burner Capacity:	196 million Btu/hour (average 505 Btu/cf)
Primary Fuel:	Clean Coke Oven Gas
Date constructed:	1969
Controls:	None (Clean coke oven gas uses Sulfiban for H_2S/SO_2 removal)

APPLICABLE REGULATIONS:
40 CFR 63, Subpart CCCCC, National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching and Battery Stacks
401 KAR 61:140, Existing By-Product Coke Manufacturing Plants

1. Operating Limitations: None

2. Emission Limitations:

a. AK Steel shall not discharge to the atmosphere any emissions from any battery stack that exhibit an opacity greater than:
   (1) Daily average of 15% opacity for a battery on a normal coking cycle.
   (2) Daily average of 20% opacity for a battery on batterywide extended coking. [40 CFR 63.7296]

   Compliance Demonstration Method:
   Compliance will be determined by the use of a continuous opacity monitor (COMS). [40 CFR 63.7331 (j)]

b. Visible emissions from the combustion stack shall not exceed 20% opacity. [Pursuant to 401 KAR 61:140 Section 3(4), Standards for Particulate Matter]

   Compliance Demonstration Method:
   Pursuant to 401 KAR 61:140, Section 5 (1)(a), the permittee shall demonstrate compliance by Reference Method 9 for combustion stack opacity. Also see Specific Monitoring Requirements 4. c. and 4.d below.

c. See Condition 1. under Section D for clean coke oven gas combustion.

3. Testing Requirements:
To demonstrate compliance with the daily average opacity limit for stacks of 15% for a by-product coke oven battery on a normal coking cycle or 20% for a by-product coke oven battery on batterywide extended coking, AK Steel must: [40 CFR 63.7324]

a. Measure and record the opacity of emissions from each battery stack for a 24-hour period using COMS.

b. Reduce the monitoring data to hourly averages as specified in 40 CFR 63.8(g)(2).

c. Compute and record the 24-hour (daily) average of the COMS data.

4. Specific Monitoring Requirements:

a. AK Steel shall monitor at all times the opacity of emissions exiting each stack using a COMS according to the requirements in 40 CFR 63.7331 (j). [40 CFR 63.7330 (e)]

b. AK Steel shall install, operate, and maintain each COM to measure and record the opacity of emissions exiting each stack according to the following requirements:
   (1) AK Steel must install, operate, and maintain each COMS according to the requirements in 40 CFR 63.8 (e) and Performance Specification 1 in 40 CFR Part 60, appendix B. Identify periods the COMS is out of control, including any periods that the COMS fails to pass a daily calibration drift assessment, quarterly performance audit, or annual zero alignment audit.
   (2) AK Steel must conduct a performance evaluation of each COMS according to the requirements in 40 CFR 63.8 and Performance Specification 1 in 40 CFR Part 60, appendix B.
   (3) AK Steel must develop and implement a quality control program for operating and maintaining each COMS according to the requirements in 40 CFR 63.8 (d).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(4) Each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.
(5) AK Steel must determine and record the hourly and daily (24-hour) average opacity according to the procedures in 40 CFR 63.7324 (b) using all the 6-minute averages collected for periods during which the COMS is not out-of-control. [40 CFR 63.7331 (j)]

c. The permittee shall use the MACT-recorded hourly average COM opacity data as an indicator of equipment performance. Within thirty (30) minutes of an hourly average opacity value exceeding twenty (20) percent, the permittee shall initiate;
(1) An evaluation of the accuracy of the COM data output, initiation of necessary repairs on the unit if it has experienced a malfunction, and recording of the results; or
(2) A determination and recording of the opacity of the emissions exiting the combustion stack following the procedures and protocol in Reference Method 9 for three (3), 6-minute blocks.

d. If the results of Method 9 test indicates an exceedance of the twenty (20) percent opacity standard, implement and record corrective actions. If conditions will not allow the performance of Method 9, document the reasons for not performing the test as well as the corrective actions implemented based on the COM opacity data.

5. Specific Record keeping Requirements:

a. AK Steel must keep the records specified in paragraphs (a)(1) through (b) (4) of this section.

(1) A copy of each notification and report that was submitted to comply with this subpart, including all documentation supporting any initial notification or notification of compliance status that was submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv).

(2) The records in 40 CFR 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests, performance evaluations, and opacity observations as required in 40 CFR 63.10(b)(2)(viii).

(4) Records of opacity observations and exceedances of 20 percent opacity standard as listed in 4.c. and 4.d. above.

b. For each COMS:

(1) Records described in 40 CFR 63.10 (b)(2)(vi) through (xi).
(2) Monitoring data for COMS during a performance evaluation as required in 40 CFR 63.6 (h)(7)(i) and (ii).
(3) Previous (that is superceded) versions of the performance evaluation plan as required in 40 CFR 63.8 (d)(3).
(4) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period. [40 CFR 63.7342 (b)]

c. The permittee shall maintain records of all Method 9 observations made of the #3 Battery Combustion Stack and any exceedance of the 20 percent opacity standard.

d. The permittee shall maintain records of corrective actions implemented in response to Method 9 and hourly COM opacity average exceedances.

6. Specific Reporting Requirements:

a. AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.

b. AK Steel shall submit quarterly compliance reports that provide information on compliance with the emission limitations for battery stacks in 40 CFR.7296. The reports must include the information in paragraphs 40 CFR 63.7341 (c)(1) through (3), and as applicable, paragraphs (c)(4) through (8) of 40 CFR 63.7341. [40 CFR 63.7341 (b)]

c. The exceedances of the twenty (20) percent opacity standard, determined by Method 9 observations, shall be reported.

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

10 (10)	**No. 3 Battery Pushing**
Description:	Emissions during pushing of hot coke from ovens into railcars
Date constructed:	1969
Controls:	Pushing Emission Control System hood car and gas duct
	Pollution Control Device baghouse (shared with Battery 4 Pushing **16**)

APPLICABLE REGULATIONS:

40 CFR 63, Subpart CCCCC, National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching and Battery Stacks

401 KAR 61:140, Existing By-Product Coke Manufacturing Plants

NON APPLICABLE REGULATIONS:

401 KAR 61:020, Existing Process Operations does not apply to the particulate emissions as this unit is subject to another emission standard with respect to particulates in 401 KAR Chapter 61.

1. Operating Limitations:

a. AK Steel must always operate and maintain the affected source (pushing), including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart. [40 CFR 63.7300]

b. Per 40 CFR 63.7323 (c) (1),(2), or (3) Operational limits for capture system:
For each capture system applied to pushing emissions, AK Steel must maintain the daily average volumetric flow rate at the inlet of control device at or above the minimum level established during the initial or most recent performance test; or
   (1) For each capture system that uses an electric motor to drive the fan, AK Steel must maintain the daily average fan motor amperes at or above the minimum level established during the initial or most recent performance test; and
   (2) For each capture system that does not use a fan driven by an electric motor, AK Steel must maintain the daily average static pressure at the inlet to the control device at an equal or greater vacuum than the level established during the initial or most recent performance test or maintain the daily average fan revolutions per minute (RPM) at or above the minimum level established during the initial or most recent performance test. [40 CFR 63.7290 (b)(3)]

c. AK Steel must prepare and operate at all times according to a written operation and maintenance plan for the general operation and maintenance of new or existing by-product coke oven batteries. Each plan must address, at a minimum, the elements listed in paragraphs (b)(1) through (6) of this section. [40 CFR 63.7300 (b)]
   (1) Frequency and method of recording underfiring gas parameters.
   (2) Frequency and method of recording battery operating temperature, including measurement of individual flue and cross-wall temperatures.
   (3) Procedures to prevent pushing an oven before it is fully coked.
   (4) Procedures to prevent overcharging and undercharging of ovens, including measurement of coal moisture, coal bulk density, and procedures for determining volume of coal charged.
   (5) Frequency and procedures for inspecting flues, burners, and nozzles.
   (6) Schedule and procedures for the daily washing of baffles.

d. AK Steel must prepare and operate at all times according to a written operation and maintenance plan for each capture system and control device applied to pushing emissions from a new or existing coke oven battery according to 40 CFR 63.7300 (c) (1) through (3).

2. Emission Limitations:

a. Work practice standards for fugitive pushing emissions (for battery with vertical flues):
   (1) 40 CFR 63.7291 (a)(1) Observe and record the opacity of fugitive pushing emissions from each oven
   (2) 40 CFR 63.7291 (a)(3) Observe and record the opacity of fugitive pushing emissions for at least four consecutive pushes per battery each day
   (3) 40 CFR 63.7291 (a)(4) Do not alter the pushing schedule to change the sequence of consecutive pushes to be observed on any day

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(4) 40 CFR 63.7291 (a)(5) If the average opacity for any individual pushes exceeds 30 percent opacity, AK Steel must take corrective action and/or increase coking time for that oven
(5) 40 CFR 63.7291 (a)(6) Demonstration and implementation of corrective action
(6) 40 CFR 63.7291 (a)(7) Oven placed on increased coking time

b. No visible emissions, as observed at fifteen (15) second intervals, shall exceed twenty (20) percent opacity from the time the oven door removal has been completed until the hot car is inside the quench tower except for ten (10) percent of the total number of observations recorded. [401 KAR 61:140 Section 3(5)(a), Standards for Particulate Matter]

Compliance Demonstration Method:
Pursuant to 401 KAR 61:140, Section 5 (1)(a), the permittee shall demonstrate compliance by Reference Method 9 for pushing operation.

For the Pollution Control Device

c. AK Steel shall not discharge to the atmosphere emissions of particulate matter from a control device applied to pushing emissions that exceed 0.02 pound per ton (lb/ton) of coke if a moveable hood vented to a stationary control device is used to capture emissions. [40 CFR 63.7290 (a)(2)]

Compliance Demonstration Method:
40 CFR 63.7322 (a), (b) Compliance will be determined by performance testing. (See testing requirements also)

d. The emission rate from the control device shall not exceed 0.030 pounds of filterable particulate per ton of coke pushed, averaged over 5 consecutive pushes. [401 KAR 61:140 Section 3(5)(b), Standards for Particulate Matter]

Compliance Demonstration Method:
Compliance is assumed by compliance with the 40 CFR 63.7290 emission limitation.

3. Testing Requirements:
For the Pollution Control Device
a. AK Steel shall conduct performance testing of the pushing emission control baghouse twice (at mid-term and renewal) during each term of the Title V operating permit. The initial test was conducted in September, 2006.
b. AK Steel must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1)

4. Specific Monitoring Requirements:
For the Pushing Emission Control System:
a. AK Steel shall at all times monitor the relative change in particulate matter loadings from the baghouse using a bag leak detection system according to the requirements in 40 CFR 63.7331 (a) and conduct inspections at the specified frequency according to the requirements in paragraphs (a)(1) through (8) of 40 CFR 63.7330. [40 CFR 63.7330 (a)]
b. AK Steel shall at all times monitor the fan motor amperes according to the requirements in 40 CFR 63.7331 (h) or the volumetric flow rate according to the requirements in 40 CFR 63.7331 (g). [40 CFR 63.7330 (d)]
c. AK Steel shall prepare and implement written operation and maintenance plans for the pushing capture system and control device. They must consist of a minimum of three specific elements (monthly inspections of capture system components, preventive maintenance, and corrective action when bag leakage is detected.) The latter includes: (1) initiating the determination of the cause within one hour of the alarm, (2) initiating corrective action within 24 hours, and (3) fix as soon as possible. [40 CFR 63.7300 (c)]
d. Monitoring Requirements pursuant to MACT standard:
(1) Observe and record the opacity of fugitive pushing emissions from each oven according to requirements in 40 CFR 63.7291(a)(1). The opacity reading shall begin when coke movement begins and ends when the hot car enters the quench tower.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(2) Observe and record the opacity of fugitive pushing emissions for at least four (4) consecutive pushes per battery each day according to requirements in 40 CFR 63.7291(a)(3).
(3) Pursuant to 40 CFR 63.7291(a)(4), do not alter the pushing schedule to change the sequence of consecutive pushes to be observed on any day.

e. AK Steel shall show compliance with the state rule pushing opacity pursuant to 401 KAR 61:140 by following the provisions of 401 KAR 61:140 Section 5(1)(a) and 401 KAR 61:140 Section 5(7). Observe and record the opacity of fugitive pushing emissions from each oven at least once every 90 days. Pursuant to 401 KAR 61:140 Section 3(5)(a), the fifteen (15) second reading will begin upon the removal of coke oven doors and conclude when the hot car has entered the quench tower. AK Steel shall observe and record the opacity of fugitive pushing emissions from four (4) consecutive pushes per battery each day.

5. Specific Record keeping Requirements:

a. AK Steel must keep the records required to show continuous compliance with each emission limitation, operation and maintenance requirement, and work practice standard for pushing. [40 CFR 63.7342 (d)]
b. Observe and record the opacity of fugitive emissions from each oven in a battery at least every 90 days in accordance with 40 CFR 63.7334 (a)(1) through (8).
c. Please see Monitoring Requirements 4.d and 4.e. above for record keeping requirements of opacity readings.
d. Maintain records indicating the legitimate operational reason for any change in a pushing schedule which results in a change in the sequence of consecutive pushes observed on any day.

6. Specific Reporting Requirements:

a. AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.
b. AK Steel must submit semiannual compliance reports that provide information for each deviation for the emission limits and for each deviation from the requirements for work practice standards and must contain the information in paragraphs (c)(4) and (7)(i) and (ii) of 40 CFR 63.7341 (c) after the effective date. [40 CFR 63.7341 (c)(7)]

7. Specific Control Equipment Operating Conditions:

AK Steel shall follow 40 CFR 63.7300 (c)(1) through (3) Operation and maintenance requirements for each capture system and control device applied to pushing emission.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

11 (11)	**No. 3 Battery Quenching**
Description:	Emissions during water-cooling of hot coke in railcars in quench tower Back-up quench tower for battery number 3 and 4
Date constructed:	1969
Controls:	Baffles, clean water

APPLICABLE REGULATIONS:
40 CFR 63, Subpart CCCCC, National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching and Battery Stacks
401 KAR 61:140, Existing By-Product Coke Manufacturing Plants

1. Operating Limitations:

a. AK Steel shall equip each quench tower with baffles such that no more than 5% of the cross sectional area of the tower may be uncovered or open to the sky. [40 CFR 63.7295 (b)(1)]

Compliance Demonstration Method:
Compliance will be determined by inspections.

b. Quench tower draft shall be adequate to ensure that all visible quenching gases exit through the baffles. [401 KAR 61:140 Section 3(6)(c)]

Compliance Demonstration Method:
Compliance is assumed by compliance with the 40 CFR 63.7295 operating limitation expressed in 1.a. above.

c. AK Steel must wash the baffles in each quench tower once each day that the tower is used to quench coke, except for days when the highest measured ambient temperature remains less than 30°F (24-hour period). [40 CFR 63.7295 (b)(2)(i) and (ii)]

Compliance Demonstration Method:
Compliance will be determined by inspections and recordkeeping.

d. AK Steel cannot use backup quench towers for more than 5% of the quenches from July 1 to June 30 of the following year. Backup quench towers meeting this criteria are not required to have baffles. [40 CFR 63.7352, definitions]

e. AK Steel must use acceptable makeup water, as defined in 40 CFR 63.7352, as makeup water for quenching. [40 CFR 63.7295 (a)(2)]

f. No process water shall be used for quenching. [401 KAR 61:140 (3)(6)(b), Standards for Particulate Matter]

Compliance Demonstration Method:
Compliance will be determined by recordkeeping.

2. Emission Limitations:

a. The concentration of total dissolved solids (TDS) in the water used for quenching must not exceed 1100 mg/l or an alternate that achieves an equivalent level of HAP control. [40 CFR 63.7295 (a)(1)(i) and (ii)]

Compliance Demonstration Method:
Compliance will be determined by weekly testing when the unit is used and recordkeeping.

b. Total dissolved solids concentration in the make-up water shall not exceed 750 mg/L. [401 KAR 61:140 (3)(6)(b), Standards for Particulate Matter]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:
City water is used for make-up water. If in the event that city water is unavailable, processed (filtered) river water is used for make-up water. Compliance will be demonstrated by Method 209C from the Standard Methods for the Evaluation of Water and Wastewater, 15th Edition, 1980, for determining total dissolved solids in make-up water.

c. No visible emissions, except water vapor or mist shall exceed opacity of 20% during the quenching operations. [401 KAR 61:140 Section 3(6)(a), Standards for Particulate Matter]

Compliance Demonstration Method:
See 4.a. Specific Monitoring Requirements, below for compliance with visible emission standards.

3. Testing Requirements:

a. If AK Steel elects the TDS limit for quench water in 40 CFR 63.7295 (a)(1)(i), AK Steel must conduct each performance test according to the following:

(1) Take the quench water sample from a location that provides a representative sample of the quench water as applied to the coke. Conduct sampling under normal and representative operating conditions.
(2) Determine the TSD concentration of the sample using Method 160.1 in 40 CFR part 136.3 (see "residue-filterable"), except that you must dry the total filterable residue at 103 to 105 degrees Centigrade instead of 180 degrees Centigrade. [40 CFR 63.7325 (a)(1) and (2)]

b. If at any time AK Steel elects to meet the alternative requirements for quench water in 40 CFR 63.7295 (a)(1)(ii), AK Steel must establish a site-specific constituent limit according to the procedures in paragraphs (b)(1) through (4) of 40 CFR 63.7325. [40 CFR 63.7325 (b)]

4. Specific Monitoring Requirements:

a. AK Steel shall observe and record the opacity of fugitive quenching emissions for at least four (4) consecutive quenches each day that the unit is operated during daylight hours. Pursuant to 401 KAR 61:140, Section 5(6), the inspector shall make his observations of quenching emissions from a position where he can observe the quench plume. The inspector observes all emissions from the time the wharf car enters the quench tower until the time it leaves the tower after the quench. The maximum opacity of the plume observed for each quench against a contrasting background is recorded. If water vapor or mist is present, the opacity is determined after the water vapor or mist is no longer visible in the plume. [401 KAR 61:140 Section 5(6)]

b. AK Steel must inspect each quench tower monthly for damaged or missing baffles and blockage. [40 CFR 63.7295 (b)(3)]

c. AK Steel must initiate repair or replacement of damaged or missing baffles within 30 days and complete as soon as practicable. [40 CFR 63.7295 (b)(4)]

d. AK Steel must determine the TDS content of quench water at least weekly, when the unit is in used, according to the requirements in 40 CFR 63.7325(a) and recording the sample results. [40 CFR 63.7333 (f)(2)]

e. If at any time AK Steel elects to meet the alternative requirements for quench water in 40 CFR 63.7295 (a)(1)(ii), AK Steel must determine the sum of the constituent limit concentrations at least monthly according to the requirements in 40 CFR 63.7325 (c), and record the sample result. [40 CFR 63.7333 (g)(2)]

5. Specific Record keeping Requirements:

a. The records of the visible emissions observations shall be kept as required by 4.a Specific Monitoring Requirements above.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. AK Steel shall maintain records that document conformance with the washing, inspection, and repair requirements in 40 CFR 63.7295 (b)(2), including records of the ambient temperature on any day that the baffles were not washed. [40 CFR 63.7334 (e)(2)]

c. AK Steel shall maintain records of the source of makeup water to document conformance with the requirements for acceptable makeup water in 40 CFR 63.7295 (a)(2). [40 CFR 63.7334 (e)(3)]

d. AK Steel shall keep the records required to show continuous compliance with each emission limitation and work practice standard for quenching. [40 CFR 63.7342 (d)]

e. AK Steel shall maintain records of date and time of the quench tower usage.

6. Specific Reporting Requirements:

a. AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit

b. AK Steel must submit semiannual compliance reports that provide information for each deviation for the quench water limits and for each deviation from the requirements for work practice standards and must contain the information in paragraphs (c)(4) and (7)(i) and (ii) of 40 CFR 63.7341 (c). [40 CFR 63.7341 (c)(7)]

c. The opacity exceedances shall be reported semi-annually to the Ashland Regional office.

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

12 (12) No. 4 Battery Charging
Description: Emissions during charging of crushed coal into oven charging ports
Extension/LAER compliance track
Date constructed: 1977
Controls: Staged Charging

APPLICABLE REGULATIONS:
401 KAR 63:002, incorporating by reference 40 CFR 63, Subpart L, National Emission Standards for Coke Oven Batteries
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality – Applies to SO2 and Particulate matter emissions.

1. Operating Limitations:
a. AK Steel shall comply with all requirements in Condition 4. under Section D for coke oven battery startups, shutdowns, and malfunctions.
b. AK Steel shall comply with all requirements in Condition 5. under Section D for work practice standards.
c. The amount of coal charged to the No. 4 Battery shall not exceed 113 tons/hr (averaged hourly throughput on a daily basis) and 990,000 tons/yr, measured as wet coal charged to the battery. [401 KAR 51:017]

Compliance Demonstration Method:
Compliance will be determined by a review of records and inspections. [40 CFR 63.309 (e)] and [40 CFR 63.309 (f)]
Compliance with annual limit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
Compliance with hourly limit shall be determined by dividing the daily charging rate by daily hours of operation.

2. Emission Limitations:
a. There shall be no visible emissions of more than 12 seconds per charge on a 30-day rolling logarithmic average. [40 CFR 63.304 (b)(2)(iv), Standards for Byproduct Coke Oven batteries]
b. The emission limitations shall apply at all times except during a period of startup, shutdown, or malfunction. The startup period shall not exceed 180 days. [40 CFR 63.300 (e)]

Compliance Demonstration Method: Compliance will be determined by Method 303 inspections and calculations using a logarithmic average.

Pursuant to Regulation 401 KAR 51:017:
c. The particulate emissions shall not exceed 8.48 lbs/hr.
d. 0.075 lbs/ton of coal processed

Compliance Demonstration Method: Compliance shall be determined by compliance with the coal charging throughput limit, Method 303 limit and an establishment and implementation of SOP for charging procedure to insure that stage charging is performed in a manner which will achieve LAER.

3. Testing Requirements:
a. There shall be daily (7 days per week) performance tests in accordance with Method 303 in Appendix A of Part 63. [40 CFR 63.309 (a)]
b. A certified observer shall conduct 5 runs each day to observe and record the seconds of visible emissions per charge for 5 consecutive charges from Battery 4. The observer may perform additional runs as needed to obtain and record a visible emissions set of values for an emission point that is valid under Method 303. Observations from fewer than 5 consecutive charges shall constitute a valid set of charging observations only in accordance with procedures and conditions specified in sections 3.8 and 3.9 of Method 303. [40 CFR 63.309 (c)(1)]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

AK Steel shall comply with all applicable methods and procedures for monitoring visible emissions in 40 CFR 63.309, Performance Tests and Procedures:

a. See Condition 3. under Section D.
b. If a valid visible emissions set of values is not obtained for a performance test, there is no compliance determination for that day. Compliance determinations will resume on the next day that a valid visible emissions set of values is obtained. [40 CFR 63.309 (c)(2)]
c. The certified observer shall make available to the Division and AK Steel a copy of the daily inspection results by the end of the day. This information is not a compliance determination. [40 CFR 63.309 (e)]
d. The certified observer shall make available to AK Steel the calculated rolling average as soon as practicable following each performance test. This information is not a compliance determination. [40 CFR 63.309 (e)]
e. The Division or their designatee shall compute and record (in accordance with Method 303), at least once monthly, the logarithmic 30-day rolling average(s) of seconds of visible emissions per charge for Battery 4 (using the equation in section 3.9 of Method 303) from the observations obtained from each performance test for each day of operations on which a valid set of emissions values is obtained. [40 CFR 63.309 (d)]
f. After each performance test, the certified observer shall check and record the collecting main pressure according to the procedure in section 6.3 of Method 303 in Appendix A to this subpart. AK Coke shall demonstrate pursuant to Method 303 in Appendix A to this subpart the accuracy of pressure measurement device upon request of the certified observer and shall not adjust the pressure to a level below the range of normal operation during or prior the inspection. [40 CFR 63.309 (c)(3)]
g. Daily charging rates and hours of operation (averaged hourly throughput on a daily basis) shall be monitored. [401 KAR 51:017]

5. Specific Record keeping Requirements:

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. These records shall include, but are not limited to:

a. See Condition 4. under Section D for required Coke Oven Battery Startup, Shutdown, and Malfunction records.
b. See Condition 5. under Section D for required work practice records.
c. See Condition 6. under Section D for 40 CFR 63.311 records retention time period.
d. See Condition 7. under Section D for the work practice and startup, shutdown, malfunction plans.
e. The daily, monthly and yearly quantities of coal charged to the No. 4 Battery. [401 KAR 51:017]
f. Records demonstrating the performance of work practice requirements according to 40 CFR 63.306(b)(7).

6. Specific Reporting Requirements:

a. AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.
b. See Condition 4. under Section D for submitting written coke oven battery startup, shutdown, and malfunction reports.
c. See Condition 8. under Section D for submitting 40 CFR 63.311 reports.

7. Specific Control Equipment Operating Conditions:

None

8. Compliance Certification Requirements:

See Condition 9. under Section D.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

13 (13)	**No. 4 Battery Topside**
Description:	Leaks from charging ports and offtake systems during coking process Extension/LAER compliance track
Date constructed:	1977
Controls:	Enhanced Operation and Maintenance Practices

APPLICABLE REGULATIONS:
40 CFR 63, Subpart L, National Emission Standards for Coke Oven Batteries
40 CFR 63, Subpart CCCCC, National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching and Battery Stacks
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality

1. Operating Limitations:

a. AK Steel shall not adjust the collection main pressure to a level below the range of normal operation during or prior to the collecting main leak inspection and pressure check. [40 CFR 63:309 (c)(3)(ii)]

b. AK Steel shall comply with all requirements in Condition 4. under Section D for coke oven battery startups, shutdowns, and malfunctions.

c. AK Steel shall comply with all requirements in Condition 5. under Section D for work practice standards.

Compliance Demonstration Method:
Compliance will be determined by a review of records and inspections. [40 CFR 63.309 (e)] and [40 CFR 63.309 (f)]
Compliance will be determined by a review of records, work practice plans and inspections. [40 CFR 63.309 (e) and 40 CFR 63.7327 (d)]

2. Emission Limitations:

a. There shall not be more than 0.4% leaking topside port lids (charging ports), as determined by the procedures in §63.309 (d)(1). [40 63.304 (b)(2)(ii)]

Compliance Demonstration Method:
Compliance will be determined by Method 303 inspections and calculations.

b. No more than two (2) percent or two (2) lids (which-ever is greater) of the charging ports shall be leaking (exhibiting visible emissions except for steam or non-smoking flame) at any time. [401 KAR 51:017]

Compliance Demonstration Method:
Compliance will be determined by Method 303 inspections and calculations.

c. There shall be not more than 2.5% leaking offtake systems, as determined by the procedures in §63.309 (d)(1). [40 CFR 63.304 (b)(2)(iii)]

Compliance Demonstration Method:
Compliance will be determined by Method 303 inspections and calculations.

d. No more than five (5) percent of the offtake system shall be leaking (exhibiting visible emissions except for steam or non-smoking flame) at any time. [401 KAR 51:017]

Compliance Demonstration Method:
Compliance is assumed by compliance with the 40 CFR 63:304 (b)(2)(iii) emission standard.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

The particulate emissions shall not exceed (Pursuant to Regulation 401 KAR 51:017):

e. 1.32 lbs/hr.
f. 0.0117 lbs/ton of coal processed

Compliance Demonstration Method:
Compliance shall be determined by demonstrating compliance with the coal charging thruput limit (see EP 12 No.4 Battery Charging, Operating Limitations (c) Compliance Demonstration Method) and Method 303 limit.

3. Testing Requirements:
There shall be daily (7 days per week) performance tests in accordance with method 303 in Appendix A of part 63. [40 CFR 63.309]

4. Specific Monitoring Requirements:
AK Steel shall comply with all applicable methods and procedures for monitoring topside leaks in 40 CFR 63.309, Performance Tests and Procedures:

a. See Condition 3. under Section D.
b. A certified observer shall conduct 1 run each day to observe and record visible emissions from each topside port lid and offtake system on Battery 4. The observer may perform additional runs as needed to obtain and record a visible emissions value for an emission point that is valid under Method 303. [40 CFR 63.309 (c)(1)]
c. If a valid visible emissions value is not obtained for a performance test, there is no compliance determination for that day. Compliance determinations will resume on the next day that a valid visible emissions value is obtained. [40 CFR 63.309 (c)(2)]
d. After each performance test, the certified observer shall check and record the collecting main pressure according to Method 303, section 6.3. AK Steel shall follow the requirements of 40 CFR 63.309 (c)(3)(i) and (ii). [40 CFR 63.309 (c)(3)]
e. The certified observer shall make available to the Division and AK Steel a copy of the daily inspection results by the end of the day. This information is not a compliance determination. [40 CFR 63.309 (e)]
f. The certified observer shall make available to AK Steel the calculated rolling average as soon as practicable following each performance test. This information is not a compliance determination. [40 CFR 63.309 (e)]
g. The Division or their designatee shall compute and record (in accordance with Method 303), at least once monthly, the 30-run rolling average of % leaking topside port lids and % leaking offtake systems on Battery 4 (using the equations in sections 4.5.3.2, 5.6.5.2, and 5.6.6.2 of Method 303) from the observations obtained from each performance test for each day of operations on which a valid emissions value is obtained. [40 CFR 63.309 (d)]

For the collecting main:
AK Steel shall comply with all applicable methods and procedures for collecting mains in 40 CFR 63.308, Standards for Collecting Mains:

h. AK Steel shall inspect the collecting main for leaks at least once daily according to Method 303 procedures. The permittee shall follow the requirements of 40 CFR 63.309 (c)(3)(i) and (ii). [40 CFR 63.308 (a)]
i. AK Steel shall temporarily seal a leak as soon as possible within 4 hours after detection [40 CFR 63.308 (c)]
j. AK Steel shall initiate repairs as soon as possible within 5 calendar days after detection. [40 CFR 63.308 (d)]
k. AK Steel shall complete repairs within 15 days after detection, unless an alternative schedule is approved by the Division. [40 CFR 63.308 (d)]
l. Compliance with the standards for collecting mains shall be determined by the Division based on a review of records and inspections. [40 CFR 63.309 (g)]

For soaking:

m. AK Steel must prepare and operate at all times according to a written work practice plan for soaking. Each plan must include measures and procedures to:
   (1) Train topside workers to identify soaking emissions that require corrective actions. [40 CFR 63.7294(a)(1)]
   (2) Damper the oven off the collecting main prior to opening the standpipe cap. [40 CFR 63.7294(a)(2)]
   (3) Determine the cause of soaking emissions that do not ignite automatically, including emissions that result form raw coke oven gas leaking from the collecting main through the damper, and emissions that result from incomplete coking. [40 CFR 63.7294(a)(3)]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(4) If soaking emissions are caused by leaks from the collecting main, take corrective actions to eliminate the soaking emissions. Corrective actions may include, but are not limited to, reseating the damper, cleaning the flushing liquor piping, using aspiration, putting the oven back on the collecting main, or igniting the emissions. [40 CFR 63.7294(a)(4)]
(5) If soaking emissions are not caused by leaks from the collecting main, notify a designated responsible party. The responsible party must determine whether the soaking emissions are due to incomplete coking. If incomplete coking is the cause of the soaking emissions, AK Steel must put the oven back on the collecting main until it is completely coked or they must ignite the emissions. [40 CFR 63.7294 (a)(5)]

For the battery:

n. AK Steel must prepare and operate at all times according to a written operation and maintenance plan for the general operation and maintenance of new or existing by-product coke oven batteries. Each plan must address, at a minimum, the following elements: [40 CFR 63.7300 (b)]
(1) Frequency and method of recording underfiring gas parameters.
(2) Frequency and method of recording battery operating temperature, including measurement of individual flue and cross-wall temperatures.
(3) Procedures to prevent pushing an oven before it is fully coked.
(4) Procedures to prevent overcharging and undercharging of ovens, including measurement of coal moisture, coal bulk density, and procedures for determining volume of coal charged.
(5) Frequency and procedures for inspecting flues, burners, and nozzles.
(6) Schedule and procedures for the daily washing of baffles. [63.7300 (b)]

5. Specific Record keeping Requirements:

a. AK Steel shall maintain records of all information required in 40 CFR 63.308 (b), Standards for Collecting Mains.
b. See Condition 4. under Section D for required coke oven battery startup, shutdown, and malfunction records.
c. See Condition 5. under Section D for required work practice records.
d. See Condition 6. under Section D for 40 CFR 63.311 records retention time period.
e. See Condition 7. under Section D for the work practice and startup, shutdown, malfunction plans.
f. AK Steel shall maintain records of all information required in 40 CFR 7334 (d) for the soaking work practice standard.
g. AK Steel shall maintain records of all information required in 40 CFR 63.7335 (a) for the battery operation and maintenance plan.
h. AK Steel shall maintain records specified in § 63.7342 paragraphs (a)(1) through (3).

6. Specific Reporting Requirements:

a. AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.
b. See Condition 4. under Section D for submitting written coke oven battery startup, shutdown, and malfunction reports.
c. See Condition 8. under Section D for submitting 40 CFR 63.311 reports.
d. AK Steel shall submit semiannual compliance reports of all information required in 40 CFR 63.7341 (c) for the soaking work practice standard.
e. AK Steel shall submit semiannual compliance reports of all information required in 40 CFR 63.7341 (c) for the battery operation and maintenance plan.

7. Specific Control Equipment Operating Conditions: None

8. Compliance Certification Requirements:

See Condition 9. under Section D.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

14 (14) No. 4 Battery Doors
Description: Leaks from doors during coking process
Extension/LAER compliance track
Date constructed: 1977
Controls: Enhanced Operation and Maintenance Practices

APPLICABLE REGULATIONS:
40 CFR 63, Subpart L, National Emission Standards for Coke Oven Batteries
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality

1. Operating Limitations:

a. AK Steel shall comply with all requirements in Condition 4. under Section D for coke oven battery startups, shutdowns, and malfunctions.

b. AK Steel shall comply with all requirements in Condition 5. under Section D for work practice standards.

Compliance Demonstration Method:
Compliance will be determined by a review of records and inspections. [40 CFR 63.309]

2. Emission Limitations:

a. On and after January 1, 1998, there shall be not more than 3.8% leaking coke oven doors for each short (less than 6 meters) by-product coke oven battery, as determined by the procedures in § 63.309 (d)(1). [40 CFR 63.304 (b)(2)(i)(B)]

b. On and after January 1, 2010, unless the Administrator promulgates more stringent limits pursuant to section 112(i)(8)(C) of the Act; there shall be not more than 3.3% leaking coke oven doors for each short by-product coke oven battery, as determined by the procedures in § 63.309 (d)(1). [40 CFR 63.304 (b)(3)(ii)]

Compliance Demonstration Method:
Compliance will be determined by Method 303 inspections and calculations.

c. No more than 10% of the doors may exhibit any visible emissions during any inspection. [401 KAR 51:017]

Compliance Demonstration Method:
Compliance is assumed by compliance with the 40 CFR 63:304 emission standard.

The particulate emissions shall not exceed (Pursuant to Regulation 401 KAR 51:017):

d. 7.92 lbs/hr.

e. 0.0701 lbs/ton of coal processed

Compliance Demonstration Method:
Compliance shall be determined by demonstrating compliance with the coal charging throughput limit (see EP 12, Operating Limitations (c) Compliance Demonstration Method) and Method 303 limit.

3. Testing Requirements:

a. There shall be daily (7 days per week) performance tests in accordance with Method 303 in Appendix A of Part 63. [40 CFR 63.309 (a)]

b. A certified observer shall conduct 1 run each day to observe and record visible emissions from each coke oven door on Battery # 4. . The observer may perform additional runs as needed to obtain and record a visible emissions value for an emission point that is valid under Method 303. In no case shall AK Steel knowingly block a coke oven door, or any portion of a door for the purpose of concealing emissions or preventing observations by the certified observer. [40 CFR 63.309 (c)(1) and (6)]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. If a valid visible emissions value is not obtained for a performance test, there is no compliance determination for that day. Compliance determinations will resume on the next day that a valid visible emissions value is obtained. [40 CFR 63.309 (c)(2)]
d. After each performance test for a by-product coke oven battery, the certified observer shall check and record the collecting main pressure according to the procedures in section 6.3 of Method 303 in Appendix A to this subpart. [40 CFR 63.309 (c) (3)]

4. Specific Monitoring Requirements:
AK Steel shall comply with all applicable methods and procedures for monitoring door leaks in 40 CFR 63.309, Performance Tests and Procedures:

a. See Condition 3. under Section D.
b. The certified observer shall make available to AK Steel the calculated rolling average as soon as practicable following each performance test. This information is not a compliance determination. [40 CFR 63.309 (e)]
c. The certified observer shall make available to the Division and AK Steel a copy of the daily inspection results by the end of the day. This information is not a compliance determination. [40 CFR 63.309 (e)]
d. The Division or their designee shall compute and record (in accordance with Method 303), at least once monthly, the 30-run rolling average of % leaking doors on Battery 4 (using the equations in sections 4.5.3.2, 5.6.5.2, and 5.6.6.2 of Method 303) from the observations obtained from each performance test for each day of operations on which a valid emissions value is obtained. [40 CFR 63.309 (d)]
e. If a valid visible emissions value is not obtained for a performance test, there is no compliance determination for that day. Compliance determinations will resume on the next day that a valid visible emissions value is obtained. [40 CFR 63.309 (c)(2)]

5. Specific Record keeping Requirements:
a. See Condition 4. under Section D for required coke oven battery startup, shutdown, and malfunction records.
b. See Condition 5. under Section D for required work practice records.
c. See Condition 6. under Section D for 40 CFR 63.311 records retention time period.
d. See Condition 7. under Section D for the work practice and startup, shutdown, malfunction plans.

6. Specific Reporting Requirements:
a. AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.
b. See Condition 4. under Section D for submitting written coke oven battery startup, shutdown, and malfunction reports.
c. See Condition 8. under Section D for submitting 40 CFR 63.311 reports.

7. Specific Control Equipment Operating Conditions:
None

8. Compliance Certification Requirements:
See Condition 9. under Section D.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

15 (15)	**No. 4 Battery Underfiring**
Description:	Coke oven heating Combustion stack emissions during coking process
Date constructed:	1977
	Rated Burner Capacity: 318 million Btu/hour (average 505 Btu/cf) 285 MMBtu/hr (PSD restriction from 10/28/76 application & 6/8/77 Permit)
Primary Fuel Usage:	Clean Coke Oven Gas (COG)
Controls:	None (Clean coke oven gas uses Sulfiban for H_2S/SO_2 removal)

APPLICABLE REGULATIONS:
40 CFR 63, Subpart CCCCC, National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching and Battery Stacks
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality
401 KAR 59:010, New Process Operations, per agreement with permittee

1. Operating Limitations:
Pursuant to a BACT determination made final on June 8, 1977, throughput shall not exceed:
a. $2{,}475{,}029 \times 10^6$ Btu/yr
b. 285×10^6 Btu/hr

2. Emission Limitations:
a. AK Steel must not discharge to the atmosphere any emissions from any battery stack at a new or existing by-product coke oven battery that exhibit an opacity greater than:
(1) Daily average of 15% opacity for a battery on a normal coking cycle.
(2) Daily average of 20% opacity for a battery on batterywide extended coking. [40 CFR 63.7296]

Compliance Demonstration Method:
Compliance will be determined by the use of a continuous opacity monitor (COMS). [40 CFR 63.7331(j)]

b. Pursuant to a BACT determination made final on June 8, 1977, The particulate emissions shall not exceed:
(1) 14.99 lbs/hr [401 KAR 51:017]
(2) 0.133 lbs/ton of coal processed [401 KAR 51:017]

Compliance Demonstration Method:
Compliance will be determined by Reference Method 5 (Front half of train) Performance Test. See 3.b below.

c. See Condition 1. under Section D for clean coke oven gas combustion.

d. Pursuant to a BACT determination made final on June 8, 1977, there shall be no particulate emissions greater than 0.030 grains filterable particulate/CF dry flue gas.

Compliance Demonstration Method:
Compliance will be determined by performance test. See 3.b below.

e. Visible emissions from the combustion stack shall not meet or exceed twenty (20) percent opacity.[401 KAR 59:010 Section 3(1)(a)]

Compliance Demonstration Method:
Pursuant to 401 KAR 59:010, Section 4 (5), the permittee shall demonstrate compliance by Reference Method 9 for combustion stack opacity. Also see Specific Monitoring Requirements 4. c. and 4.d below.

3. Testing Requirements:
a. To demonstrate compliance with the daily average opacity limit for stacks of 15% for a by-product coke oven battery on a normal coking cycle or 20% for a by-product coke oven battery on batterywide extended coking, AK Steel must: [40 CFR 63.7324]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(1) Measure and record the opacity of emissions from each battery stack for a 24-hour period using COMS.

(2) Reduce the monitoring data to hourly averages as specified in Sec. 63.8(g)(2).

(3) Compute and record the 24-hour (daily) average of the COMS data.

b. Within 180 days of the issuance of this permit, the permittee shall conduct a Reference Method 5 test to demonstrate compliance with the particulate emission limits contain in 2.b and 2. d above

4. Specific Monitoring Requirements:

a. AK Steel shall monitor at all times the opacity of emissions exiting each stack using a COMS according to the requirements in 40 CFR 63.7331 (j). [40 CFR 63.7330 (e)]

b. AK Steel shall install, operate, and maintain each COM to measure and record the opacity of emissions exiting each stack according to the following requirements:

(1) AK Steel must install, operate, and maintain each COMS according to the requirements in 40 CFR 63.8 (e) and Performance Specification 1 in 40 CFR Part 60, appendix B. Identify periods the COMS is out of control, including any periods that the COMS fails to pass a daily calibration drift assessment, quarterly performance audit, or annual zero alignment audit.

(2) AK Steel must conduct a performance evaluation of each COMS according to the requirements in 40 CFR 63.8 and Performance Specification 1 in 40 CFR Part 60, appendix B.

(3) AK Steel must develop and implement a quality control program for operating and maintaining each COMS according to the requirements in 40 CFR 63.8 (d).

(4) Each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(5) AK Steel must determine and record the hourly and daily (24-hour) average opacity according to the procedures in 40 CFR 63.7324 (b) using all the 6-minute averages collected for periods during which the COMS is not out-of-control. [40 CFR 63.7331 (j)]

c. The permittee shall use the MACT-recorded hourly average COM opacity data as an indicator of equipment performance. Within thirty (30) minutes of an hourly average opacity value exceeding twenty (20) percent, the permittee shall initiate;

(1) An evaluation of the accuracy of the COM data output, initiation of necessary repairs on the unit if it has experienced a malfunction, and recording of the results; or

(2) A determination and recording of the opacity of the emissions exiting the combustion stack following the procedures and protocol in Reference Method 9 for three (3), 6-minute blocks.

d. If the results of Method 9 test indicates an exceedance of the twenty (20) percent opacity standard, implement and record corrective actions. If conditions will not allow the performance of Method 9, document the reasons for not performing the test as well as the corrective actions implemented based on the COM opacity data.

5. Specific Record keeping Requirements:

a. AK Steel shall keep the records specified in paragraphs (a)(1) through (b) (4) of this section.

(1) A copy of each notification and report that was submitted to comply with this subpart, including all documentation supporting any initial notification or notification of compliance status that was submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv).

(2) The records in 40 CFR 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests, performance evaluations, and opacity observations as required in 40 CFR 63.10(b)(2)(viii).

(4) Daily records of PM emission rate (lbs/hr) using hourly coal charged, averaged on a daily basis.

(5) Records of opacity observations and exceedances of 20 percent opacity standard as listed in 4.c. and 4.d. above.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. For each COMS:

(1) Records described in 40 CFR 63.10 (b)(2)(vi) through (xi).
(2) Monitoring data for COMS during a performance evaluation as required in 40 CFR 63.6 (h)(7)(i) and (ii).
(3) Previous (that is superceded) versions of the performance evaluation plan as required in 40 CFR 63.8 (d)(3).
(4) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period. [40 CFR 7342 (b)]

c. The permittee shall maintain records of all Method 9 observations made of the #3 Battery Combustion Stack and any exceedance of the 20 percent opacity standard.
d. The permittee shall maintain records of corrective actions implemented in response to Method 9 and hourly COM opacity average exceedances.

6. Specific Reporting Requirements:

a. AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.
b. AK Steel shall submit quarterly compliance reports that provide information on compliance with the emission limitations for battery stacks in 40 CFR.7296. The reports must include the information in paragraphs 40 CFR 63.7341 (c)(1) through (3), and as applicable, paragraphs (c)(4) through (8) of 40 CFR 63.7341. [40 CFR 63.7341 (b)]
c. The exceedances of the twenty (20) percent opacity standard, determined by Method 9 observations, shall be reported.
d. Results of Reference Method 5 performance test shall be reported in accordance with Section F. 11. of this permit.

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

16 (16)	**No. 4 Battery Pushing**
Description:	Emissions during pushing of hot coke from ovens into railcars
Date constructed:	1977
Controls:	Pushing Emission Control System hood car and gas ducts
	Pollution Control Device baghouse (shared with Battery 3 Pushing **10**)

APPLICABLE REGULATIONS:

40 CFR 63, Subpart CCCCC, National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching and Battery Stacks
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality
401 KAR 59:010, New Process Operations. Applicable to particulate emissions.

1. Operating Limitations:

a. AK Steel must always operate and maintain the affected source (pushing), including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart. [40 CFR 63.7300]

b. Per 40 CFR 63.7323 (c) (1),(2), or (3) Operational limits for capture system:
For each capture system applied to pushing emissions, AK Steel must maintain the daily average volumetric flow rate at the inlet of control device at or above the minimum level established during the initial or most recent performance test; or
   (1) For each capture system that uses an electric motor to drive the fan, AK Steel must maintain the daily average fan motor amperes at or above the minimum level established during the initial or most recent performance test; and
   (2) For each capture system that does not use a fan driven by an electric motor, AK Steel must maintain the daily average static pressure at the inlet to the control device at an equal or greater vacuum than the level established during the initial or most recent performance test or maintain the daily average fan revolutions per minute (RPM) at or above the minimum level established during the most recent performance test. [40 CFR 63.7290 (b)(3)]

c. AK Steel must prepare and operate at all times according to a written operation and maintenance plan for the general operation and maintenance of new or existing by-product coke oven batteries. Each plan must address, at a minimum, the elements listed in paragraphs (d)(1) through (6) of this section.
   (1) Frequency and method of recording underfiring gas parameters.
   (2) Frequency and method of recording battery operating temperature, including measurement of individual flue and cross-wall temperatures.
   (3) Procedures to prevent pushing an oven before it is fully coked.
   (4) Procedures to prevent overcharging and undercharging of ovens, including measurement of coal moisture, coal bulk density, and procedures for determining volume of coal charged.
   (5) Frequency and procedures for inspecting flues, burners, and nozzles.
   (6) Schedule and procedures for the daily washing of baffles.

d. AK Steel must prepare and operate at all times according to a written operation and maintenance plan for each capture system and control device applied to pushing emissions from a new or existing coke oven battery according to 40 CFR 63.7300 (c) (1) through (3).

e. Pursuant to a BACT determination made final on June 8, 1977, The throughput shall not exceed:
   (1) 782,000 tons of coke /yr
   (2) 89 tons of coke/hr (averaged hourly thruput on a daily basis)

Compliance Demonstration Method:
Compliance with annual limit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
Compliance with hourly limit shall be determined by dividing the daily pushing rate by daily hours of operation.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations:

a. Work practice standards for fugitive pushing emissions (for battery with vertical flues):
   (1) 40 CFR 63.7291 (a)(1) Observe and record the opacity of fugitive pushing emissions from each oven
   (2) 40 CFR 63.7291 (a)(3) Observe and record the opacity of fugitive pushing emissions for at least four consecutive pushes per battery each day
   (3) 40 CFR 63.7291 (a)(4) Do not alter the pushing schedule to change the sequence of consecutive pushes to be observed on any day
   (4) 40 CFR 63.7291 (a)(5) If the average opacity for any individual pushes exceeds 35 percent opacity, AK Steel must take corrective action and/or increase coking time for that oven
   (5) 40 CFR 63.7291 (a)(6) Demonstration and implementation of corrective action
   (6) 40 CFR 63.7291 (a)(7) Oven placed on increased coking time

Compliance Demonstration Method:
To determine compliance with the work practice standards for fugitive pushing emissions, AK Steel must demonstrate continuous compliance according to the requirements of 40 CFR 63.7334 (a)(1) through (8).

b. Pursuant to a LAER determination revision made final in May 1979, the Pushing Emission Control System shall have no particulate emissions greater than 20% opacity.

Compliance Demonstration Method:
Compliance is assumed by compliance with the 401 KAR 59:010 opacity limitations.

For the Pollution Control Device

c. AK Steel shall not discharge to the atmosphere emissions of particulate matter from a control device applied to pushing emissions that exceed 0.02 pound per ton (lb/ton) of coke for a moveable hood vented to a stationary control device is used to capture emissions. [40 CFR 63.7290 (a)(2)]

Compliance Demonstration Method:
40 CFR 63.7322 (a), (b) Compliance will be determined by performance testing. (See testing requirements also)

d. There shall be no fugitive emissions greater than or equal to 20% opacity or visible beyond the lot line of the property. [401 KAR 59:010 (3)(1)(b), Standard for Particulate Matter]

Compliance Demonstration Method:
The permitee shall take reasonable precautions to control the fugitive emissions from crossing the property boundary. Also see the 3. Testing Requirements and 4. Monitoring Requirements below

e. There shall be no particulate emissions from any baghouse vent greater than or equal to 20% opacity. [401 KAR 59:010 (3)(1)(a), Standard for Particulate Matter]

Compliance Demonstration Method:
Compliance will be demonstrated by maintaining compliance with the requirements of 40 CFR 63.7330 and 63.7331.

3. Testing Requirements:

For the Pollution Control Device

a. AK Steel shall conduct performance testing of the pushing emission control baghouse twice (at mid-term and renewal) during each term of the Title V operating permit. The initial test was conducted in September, 2006.
b. AK Steel must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

For the Pushing Emission Control System:

a. AK Steel shall at all times monitor the relative change in particulate matter loadings from the baghouse using a bag leak detection system according to the requirements in 40 CFR 63.7331 (a) and conduct inspections at the specified frequency according to the requirements in paragraphs (a)(1) through (8) of 40 CFR 63.7330. [40 CFR 63.7330 (a)]

b. AK Steel shall at all times monitor the fan motor amperes according to the requirements in 40 CFR 63.7331 (h) or the volumetric flow rate according to the requirements in 40 CFR 63.7331 (g). [40 CFR 63.7330 (d)]

c. AK Steel shall prepare and implement written operation and maintenance plans for the pushing capture system and control device. They must consist of a minimum of three specific elements (monthly inspections of capture system components, preventive maintenance, and corrective action when bag leakage is detected.) The latter includes: (1) initiating the determination of the cause within one hour of the alarm, (2) initiating corrective action within 24 hours, and (3) fix as soon as possible. [40 CFR 63.7300 (c)]

d. Monitoring Requirements pursuant to MACT standard:
   (1) Observe and record the opacity of fugitive pushing emissions from each oven according to requirements in 40 CFR 63.7291(a)(1). The opacity reading shall begin when coke movement begins and ends when the hot car enters the quench tower.
   (2) Observe and record the opacity of fugitive pushing emissions for at least four (4) consecutive pushes per battery each day according to requirements in 40 CFR 63.7291(a)(3).
   (3) Pursuant to 40 CFR 63.7291(a)(4), do not alter the pushing schedule to change the sequence of consecutive pushes to be observed on any day.

Pushing (the time the coke side door is removed to the time the quench car enters the quench tower)

e. The permittee shall monitor the daily pushing rates and hours of operation. [401 KAR 51:017]

f. The following monitoring shall be used to show compliance with opacity standard pursuant to 401 KAR 59:010: Observe and record the opacity of fugitive pushing emissions from each oven at least once every 90 days. For the purpose of 401 KAR 59:010(3)(1)(b), the fifteen (15) second reading shall begin upon the removal of coke oven doors and continue till the hot car enters the quench tower. Method 9 shall be used to read the visible emissions pursuant to 401 KAR 59:010. AK Steel shall observe and record the opacity of fugitive pushing emissions from four (4) consecutive pushes per battery each day.

5. Specific Record keeping Requirements:

a. AK Steel must keep the records required to show continuous compliance with each emission limitation, operation and maintenance requirement, and work practice standard for pushing. [40 CFR 63.7342 (d)]

b. Records of the daily, monthly and yearly quantities of coke pushed, the hours of operation per day and hourly average of coke pushed from No. 4 Battery shall be maintained. [401 KAR 51:017]

c. Please see 4.f. above for visible emissions record keeping.

d. Maintain records indicating the legitimate operational reason for any change in a pushing schedule which results in a change in the sequence of consecutive pushes observed on any day.

6. Specific Reporting Requirements:

a. AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.

b. AK Steel must submit semiannual compliance reports that provide information for each deviation for the emission limits and for each deviation from the requirements for work practice standards and must contain the information in paragraphs (c)(4) and (7)(i) and (ii) of 40 CFR 63.7341 (c) after the effective date. [40 CFR 63.7341 (c)(7)]

7. Specific Control Equipment Operating Conditions:

40 CFR 63.7300 (c)(1) through (3) Operation and maintenance requirements for each capture system and control device applied to pushing emission

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

17 (17)	**No. 4 Battery Quenching**
Description:	Emissions during water-cooling of hot coke in railcars in quench tower
Date constructed:	1977
Controls:	Baffles, clean water

APPLICABLE REGULATIONS:
40 CFR 63, Subpart CCCCC, National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching and Battery Stacks
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality
401 KAR 59:010, New Process Operations

1. Operating Limitations:

a. AK Steel must equip each quench tower with baffles such that no more than 5% of the cross sectional area of the tower may be uncovered or open to the sky. [40 CFR 63.7295 (b)(1)]

Compliance Demonstration Method:
Compliance will be determined by inspections.

b. Pursuant to PSD/BACT determination, the quench tower draft shall be adequate to ensure that all visible quenching gases exit through the baffles and not be allowed to escape from the entrance to or exit from the quench station.

Compliance Demonstration Method:
Compliance is assumed by compliance with the 40 CFR 63.7295 operating limitation.

c. AK Steel must wash the baffles in each quench tower once each day that the tower is used to quench coke, except for days when the highest measured ambient temperature remains less than 30°F (24 hour period). [40 CFR 63.7295 (b)(2)(i) and (ii)]

Compliance Demonstration Method:
Compliance will be determined by recordkeeping and inspections.

d. AK Steel cannot use backup quench towers for more than 5% of the quenches from July 1 to June 30 of the following year. Backup quench towers meeting this criterion are not required to have baffles. [40 CFR 63.7352, definitions] Note: EP 11 is the back-up quench tower.

Compliance Demonstration Method:
Compliance will be determined by recordkeeping and inspections.

e. AK Steel shall use acceptable makeup water, as defined in 40 CFR 63.7352, as makeup water for quenching. [40 CFR 63.7295 (a)(2)]

Compliance Demonstration Method:
Compliance will be determined by recordkeeping.

f. Pursuant to PSD/BACT determination, no process water shall be used for quenching.

Compliance Demonstration Method:
Compliance is assumed by compliance with the 40 CFR 63.7295 emission limitation.

The Throughput shall not exceed [401 KAR 51:017]:
g. 782,000 tons of coke per year
h. 89 tons of coke per hour (averaged hourly throughput on a daily basis)

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:
Compliance will be determined by a review of records.
Compliance with annual limit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
Compliance with hourly limit shall be determined by dividing the daily pushing rate by daily hours of operation.

2. Emission Limitations:

a. The concentration of total dissolved solids (TDS) in the water used for quenching must not exceed 1100 mg/L or an alternate that achieves an equivalent level of HAP control. [40 CFR 63.7295 (a)(1)(i) and (ii)]

Compliance Demonstration Method:
Compliance will be determined by weekly testing and recordkeeping.

b. Pursuant to PSD/BACT determination, dissolved solids concentration shall not exceed 1000 mg/L, and suspended solids concentration shall not exceed 100 mg/L in the make-up water.

Compliance Demonstration Method:
City water is used for make-up water. If in the event that city water is unavailable, processed (filtered) river water is used for make-up water. Compliance will be demonstrated by Method 209C from the Standard Methods for the Evaluation of Water and Wastewater, 15th Edition, 1980, for determining total dissolved solids in make-up water.

c. There shall be no particulate emissions greater than or equal to 20% opacity. [401 KAR 59:010 (3)(1)(b), Standard for Particulate Matter]

Compliance Demonstration Method:
See 4.a. Specific Monitoring Requirements listed below for compliance with visible emission limitation.

Particulate emissions shall not exceed [Pursuant to Regulation 401 KAR 51:017]:
d. 135.62 lbs/hr
e. 1.2 lbs/ton of coal processed

Compliance Demonstration Method:
PM emissions = [#4 coal throughput (tons/hr)] x [0.54 lb PM/ton of coal charged]
Emission Factor from AP-42 for quench tower with baffles using clean water
Accordingly, compliance with coal charging limit demonstrates compliance with this limit.

3. Testing Requirements:
a. If AK Steel elects the TDS limit for quench water in 40 CFR 63.7295 (a)(1)(i), AK Steel must conduct each performance test according to the following:
   (1) Take the quench water sample from a location that provides a representative sample of the quench water as applied to the coke. Conduct sampling under normal and representative operating conditions.
   (2) Determine the TSD concentration of the sample using Method 160.1 in 40 CFR part 136.3 (see "residue-filterable"), except that you must dry the total filterable residue at 103 to 105 degrees Centigrade instead of 180 degrees Centigrade. [40 CFR 63.7325 (a)(1) and (2)]
b. If at any time after the effective date AK Steel elects to meet the alternative requirements for quench water in 40 CFR 63.7295 (a)(1)(ii), AK Steel must establish a site-specific constituent limit according to the procedures in paragraphs (b)(1) through (4) of 40 CFR 63.7325. [40 CFR 63.7325 (b)]

4. Specific Monitoring Requirements:
a. AK Steel shall monitor the following (401 KAR 52:020, Section 10):
AK Steel shall observe and record the opacity of fugitive quenching emissions for at least four (4) consecutive quenches each day that the unit is operated during daylight hours. Visible emissions from the quench tower shall be monitored on a daily basis using Kentucky Method 150 (F-1).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. AK Steel shall inspect each quench tower monthly for damaged or missing baffles and blockage. [40 CFR 63.7295 (b)(3)]
c. AK Steel shall initiate repair or replacement of damaged or missing baffles within 30 days and complete as soon as possible. [40 CFR 63.7295 (b)(4)]
d. AK Steel shall determine the TDS content of quench water at least weekly according to the requirements in 40 CFR 63.7325(a) and recording the sample results. [40 CFR 63.7333 (f)(2)]
e. If at any time AK Steel elects to meet the alternative requirements for quench water in 40 CFR 63.7295 (a)(1)(ii), AK Steel must determine the sum of the constituent limit concentrations at least monthly according to the requirements in 40 CFR 63.7325 (c), and record the sample results. [40 CFR 63.7333 (g)(2)]

5. Specific Record keeping Requirements:
a. AK Steel shall retain records of the following (401 KAR 52:020, Section 10):
Daily opacity observations of the quench tower stack for five years.
b. AK Steel must maintain records that document conformance with the washing, inspection, and repair requirements in 40 CFR 63.7295 (b)(2), including records of the ambient temperature on any day that the baffles were not washed. [40 CFR 63.7334 (e)(2)]
c. AK Steel must maintain records of the source of makeup water to document conformance with the requirements for acceptable makeup water in 40 CFR 63.7295 (a)(2). [40 CFR 63.7334 (e)(3)]
d. AK Steel must keep the records required to show continuous compliance with each emission limitation and work practice standard for quenching. [40 CFR 63.7342 (d)]
e. Records must be maintained of the daily, monthly, and 12-month rolling annual tons of coke from No. 4 Battery quenched, the daily hours of operation and the average hourly tons of coke from No. 4 Battery quenched.
f. See the Monitoring requirements 4.a. above.

6. Specific Reporting Requirements:
a. AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit
b. AK Steel must submit semiannual compliance reports that provide information for each deviation for the quench water limits and for each deviation from the requirements for work practice standards and must contain the information in paragraphs (c)(4) and (7)(i) and (ii) of 40 CFR 63.7341 (c). [40 CFR 63.7341 (c)(7)]
c. Opacity exceedances shall be reported semiannually to the Ashland Regional Office.

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

18 (18) Coke Screening
Description: Screening of coke for size
Date constructed: 1969
Controls: Dust Suppressant

APPLICABLE REGULATIONS:
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality
401 KAR 61:020, Existing Process Operations

1. Operating Limitations:
a. Pursuant to PSD/BACT determination, AK Steel shall use wet suppression to control fugitive dust.
b. Pursuant to PSD/BACT determination, throughput for No. 4 battery 782,000 tons coke per year.

Compliance Demonstration Method:
Compliance will be determined by visible emissions testing, review of records and inspection.

2. Emission Limitations:
a. There shall be no fugitive emissions greater than or equal to 20% opacity or visible beyond the lot line of the property. [401 KAR 61:020 (3)(1)(b), Standard for Particulate Matter]
b. Discharge of particulate emissions to the atmosphere with an opacity greater than 5% is not allowed by the coke screening station and associated handling, conveying and transfer points (From No. 4 Battery, per 1977 PSD determination).

Compliance Demonstration Method:
Compliance will be determined by visible emissions testing.

Coke Screening For Battery #4 (Per PSD determination):
c. The particulate emissions shall not exceed
   I. 16.82 lbs/hr
   II. 0.054 lbs/ton of coal processed

Compliance Demonstration Method:
Compliance is assumed by complying with the opacity limit, and keeping the monthly throughput rate records.

3. Testing Requirements: None

4. Specific Monitoring Requirements:
AK Steel shall monitor the following (401 KAR 52:020, Section 10):
Visible emissions on a monthly basis using U.S. EPA Reference Method 9.

5. Specific Record keeping Requirements:
AK Steel shall retain records of the following (401 KAR 52:020, Section 10):
a. Monthly opacity observations for five years.
b. Monthly quantity of coke charged to screening station from No. 4 Battery.

6. Specific Reporting Requirements:
AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

19 (19)	**Sulfiban-Sulfur Recovery Unit**
Description:	Sulfiban MEA packed-tower gas absorption unit to remove H_2S from Raw Coke Oven Gas Claus sulfur recovery unit to convert H_2S to solid sulfur Input: Raw (Sour) Coke Oven Gas Output: Clean (Sweet) Coke Oven Gas, solid Sulfur, tailgas
Rated Burner Capacity:	8.5 MMBtu/hour
Primary Fuel:	Clean Coke Oven Gas
Date constructed:	1977
Controls:	Thermal Incinerator for Claus unit tailgas

APPLICABLE REGULATIONS:
401 KAR 59:010, New Process Operations
401 KAR 61:035, Existing process gas streams

1. Operating Limitations:
AK Steel shall operate the Sulfiban at all times, except during periods of maintenance outage, such that the remaining concentration of sulfur compounds (expressed as sulfur dioxide) in clean coke oven gas and the Claus unit tailgas will comply with the coke oven gas and tailgas combustion standard in Condition 1. under Section D.

2. Emission Limitations:
a. See Condition 1. under Section D for clean coke oven gas combustion in the Claus unit and tailgas combustion in the tailgas incinerator.
b. Sulfur dioxide emissions from the process gas stream shall not exceed 2.39 gr/dscf (2000 ppm by volume) at zero percent oxygen. [401 KAR 61:035, Section 4]
c. Hydrogen sulfide emissions shall not exceed 0.1 gr/dscf (165 ppm by volume) at zero percent oxygen. [401 KAR 61:035, Section 3]
d. AK Steel shall not allow the emissions of carbon monoxide from the process gas stream to exit unless the gases are burned at 1300°F for five-tenths (0.5) seconds or greater in a direct flame afterburner or equivalent device. [401 KAR 61:035, Section 5]
e. There shall be no particulate emissions greater than or equal to 20% opacity from the tailgas incinerator. [401 KAR 59:010 (3)(1)(a)]

Compliance Demonstration Method:
Compliance will be determined by visible emissions testing.

3. Testing Requirements:
a. Within180 days of issuance of this permit AK Steel shall conduct a performance test on the Sulfiban unit in accordance with 401 KAR 50:055, General compliance requirements, and with 401 KAR 61:140 (5)(2). During the performance test, AK Steel shall simultaneously:
   i. Measure the concentrations of H_2S, COS, and CS_2 in the raw coke oven gas to determine the proportions of COS and CS_2 to H_2S and calculate factors $F_{COS,inlet}$ and $F_{CS2,inlet}$.

   ii. Measure the concentrations of H_2S, COS, and CS_2 in the clean coke oven gas to determine the proportions of COS and CS_2 to H_2S and calculate factors $F_{COS,CCOG}$ and $F_{CS2,CCOG}$.

$$F_{\mathrm{COS},inlet} = \frac{measured \quad ppm \quad \mathrm{COS}}{measured \quad ppm \quad H_2S} \qquad F_{CS_2,inlet} = \frac{measured \quad ppm \quad CS_2}{measured \quad ppm \quad H_2S}$$

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

iii. Measure the flowrate (MMCF/hr) of the raw coke oven gas stream at the inlet of the MEA packed-tower gas absorption unit by in-line continuous orifice, venturi or elbow tap flow meters, or other methods approved by the Director, for the entire duration of the performance test.

$$MMCF\ RCOG = [\frac{MMCF}{hr}\ measured\ \ at\ \ the\ \ MEA\ \ scrubber\ \ inlet] * [Hours\ \ of\ \ test]$$

iv. Measure the flowrate (MMCF/hr) of the clean coke oven gas stream at the outlet of the MEA packed-tower gas absorption unit by in-line continuous orifice, venturi or elbow tap flow meters, or other methods approved by the Director, for the entire duration of the performance test.

$$MMCF\ CCOG = [\frac{MMCF}{hr}\ measured\ \ at\ \ the\ \ MEA\ \ scrubber\ \ exit] * [Hours\ \ of\ \ test]$$

v. Measure the mass (lb) of solid sulfur produced by the Claus system for the entire duration of the performance test.

vi. See Condition 1. under SECTION D for clean coke oven gas.

b. The Method 9 test shall be performed concurrently with the performance test.

4. Specific Monitoring Requirements:

AK Steel shall monitor the following (401 KAR 52:020, Section 26):

a. Visible emissions of the tailgas incinerator stack once daily during daylight hours Monday through Friday using U.S. EPA Reference Method 9.

b. The combustion temperature of the process gas stream and ensure it remains above 1300°F;

Parametric Monitoring:

c. AK Steel shall take daily measurements of the volume (MMCF) of raw coke oven gas entering the MEA packed-tower gas absorption unit and calculate the MMCF raw coke oven gas produced.

d. AK Steel shall take daily measurements of the volume (MMCF) of clean coke oven gas exiting the MEA packed-tower gas absorption unit and calculate the MMCF clean coke oven gas produced.

e. AK Steel shall take daily measurements of the concentration of H_2S in the raw coke oven gas stream entering the MEA packed-tower gas absorption unit and calculate the *Total Inlet Sulfur* as lb SO_2.

$$Total\ \ Inlet\ \ Sulfur\ (\frac{lb\ SO_2}{MMCF}) = [measured\ \ \ ppm\ \ H_2S] * [1 + F_{COS,inlet} + 2F_{CSSUB2,inlet}] * 0.1635$$

f. AK Steel shall take daily measurements of the solid sulfur exiting the Claus system and calculate *Total Solid Sulfur* as lb SO_2

$$Total\ Solid\ Sulfur\ (lb\ SO_2) = [lb\ \ of\ \ solid\ \ sulfur\ \ exiting\ \ Claus\ \ Unit\ \ during\ \ test] * \frac{2\ lb\ SO_2}{lb\ S}$$

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

g. AK Steel shall take daily measurements of the concentration of H_2S in the clean coke oven gas stream exiting the MEA packed-tower gas absorption unit upstream of the side stream for clean coke oven gas to be combusted in the Claus system and calculate the lb SO_2/[MMCF Clean coke oven gas]. This value will be used in compliance demonstrations for SO_2 emission limitations at the boilers while combusting clean coke oven gas.
h. For any daily compliance determination for coke oven gas combustion that exceeds the standard, AK Steel shall perform a maintenance inspection of the Sulfiban packed-tower gas absorption unit and Claus Unit, excluding periods when the Sulfiban System is shutdown for a maintenance outage or experiencing a malfunction.

5. Specific Record keeping Requirements:

AK Steel shall retain records of the following (401 KAR 52:020, Section 26):

a. Daily opacity observations for five years.
b. Maintain a log of the combustion temperature of the process gas stream.
c. A log of the measured concentrations and flowrates.
d. A log of the calculated *Total Inlet Sulfur* and *Total Solid Sulfur* values.
e. A log of the calculated lb SO_2/[MMCF clean coke oven gas produced] values.
f. The results of any maintenance inspections.
g. Any corrective actions taken.

6. Specific Reporting Requirements:

AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.

7. Specific Control Equipment Operating Conditions:

a. The MEA packed-tower gas absorption unit shall be operated at all times during the coking operation, except during periods of maintenance outage.

b. The permittee shall monitor and record the following packed-tower gas absorption unit operating parameters at least once per shift:

(1) The temperature difference between the gas inlet and outlet

(2) The MEA flow rate

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

20 (20)	**No. 1 Coke Boiler**
Description:	Indirect heat exchanger
Rated Burner Capacity :	130 million Btu/hr
Primary Fuel:	Clean Coke Oven Gas
Secondary Fuel:	Natural Gas
Date constructed:	1953
Controls:	None (Clean coke oven gas uses Sulfiban for H_2S/SO_2 removal)

21 (21)	**No. 2 Coke Boiler**
Description:	Indirect heat exchanger
Rated Burner Capacity :	130 million Btu/hr
Primary Fuel:	Clean Coke Oven Gas
Secondary Fuel:	Natural Gas
Date constructed:	1953
Controls:	None (Clean coke oven gas uses Sulfiban for H_2S/SO_2 removal)

22 (22)	**No. 3 Coke Boiler**
Description:	Indirect heat exchanger
Rated Burner Capacity :	130 million Btu/hr
Primary Fuel:	Clean Coke Oven Gas
Secondary Fuel:	Natural Gas
Date constructed:	1953
Controls:	None (Clean coke oven gas uses Sulfiban for H_2S/SO_2 removal)

APPLICABLE REGULATIONS:
401 KAR 61:015, Existing Indirect Heat Exchangers
401 KAR 61:140, Existing By-Product Coke Manufacturing Plants, for coke oven gas combustion

1. Operating Limitations:
See Condition 2. under Section D for natural gas usage limitation.

2. Emission Limitations:
a. There shall be no particulate emissions greater than 0.236 lb/MMBTU actual heat input, as determined by the Appendix A equation for a Priority I area. [401 KAR 61:015, Section 4]

Compliance Demonstration Method:
Compliance with the particulate limit shall be demonstrated by calculating the heat value in MMBTU/MMCF for coke oven gas and using the most recent stack test results or particulate emission factor in lbs/MMCF as found in the emission inventory system (KYEIS) for both coke oven gas and natural gas.

b. There shall be no emissions greater than 20% opacity in regions classified as Priority I with respect to particulate matter except as provided for in Section (4)(2)(c). [401 KAR 61: 015, Section 4, Standard for Particulate Matter]

Compliance Demonstration Method:
Compliance will be determined by visible emissions.

c. There shall be no SO_2 emissions greater than 3.781 lb/MMBTU actual heat input, as determined by the Appendix B equation for County Class VA based on the total heat input of all fuels burned in each boiler. [401 KAR 61: 015, Section 5, Standard for Sulfur Dioxide]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:
Compliance with the sulfur dioxide limit shall be demonstrated by calculating the heat value in MMBTU/MMCF for coke oven gas and using the KYEIS sulfur dioxide emission factor in lbs/MMCF for natural gas and after the testing the AK Steel sulfur dioxide emission factor for clean coke oven gas as determined by the performance test for EP 19.

d. See Condition 1. under Section D for clean coke oven gas combustion.

3. **Testing Requirements**: None

4. Specific Monitoring Requirements:

a. AK Steel shall determine the monthly fuel usage rate of each fuel combusted in each boiler. [401 KAR 61:015, Section 6 (3), Monitoring of Operations]
b. AK Steel shall monitor visible emissions of the main boiler stack on a monthly basis using U.S. EPA Reference Method 9 [401 KAR 52:020, Section 10]

5. Specific Record keeping Requirements:

AK Steel shall retain records of the following for five years [401 KAR 52:020, Section 10]:

a. The amount of each fuel burned on a monthly basis.
b. The percentage of natural gas burned of the total heat input for each boiler on a monthly basis.
c. Monthly opacity observations.
d. The particulate emissions and SO_2 emissions per total heat input for each boiler based on the amount of each fuel burned on a monthly basis (see Section D, Condition 2).

6. Specific Reporting Requirements:

AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.

7. Specific Control Equipment Operating Conditions:

None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

23 (23)	**No. 5 Coke Boiler**
Description:	Indirect heat exchanger
Rated Burner Capacity:	82.3 million Btu/hr
Primary Fuel:	Clean Coke Oven Gas
Secondary Fuel:	Natural Gas
Date installed:	1994 (constructed 1970)
Controls:	None (Clean coke oven gas uses Sulfiban for H_2S/SO_2 removal)

APPLICABLE REGULATIONS:
401 KAR 59:015, New Indirect Heat Exchangers
401 KAR 61:140, Existing By-Product Coke Manufacturing Plants, for coke oven gas combustion

1. Operating Limitations:
See Condition 2. under SECTION D for natural gas usage limitation.

2. Emission Limitations:
a. There shall be no particulate emissions greater than 0.1 lb/MMBTU actual heat input. [401 KAR 59:015 (4)(1)(b), Standard for Particulate Matter]

Compliance Demonstration Method:
Compliance with the particulate limit shall be demonstrated by calculating the heat value in MMBTU/MMCF for coke oven gas and using the AP-42 particulate emission factor in lbs/MMCF for both coke oven gas and natural gas.

b. There shall be no particulate emissions greater than 20% opacity except as provided for in 401 KAR 59:015 (4)(2)(b) or (c). [401 KAR 59:015 (4)(2)]

Compliance Demonstration Method:
Compliance will be determined by visible emissions testing.

c. There shall be no SO_2 emissions greater than 0.8 lbs/MMBTU actual heat input based on the total heat input from all fuels burned in the boiler. [401 KAR 59:015 (5)(1)(c)]

Compliance Demonstration Method:
Compliance with the sulfur dioxide limit shall be demonstrated by calculating the heat value in MMBTU/MMCF for coke oven gas and using the AP-42 sulfur dioxide emission factor in lbs/MMCF for natural gas and after the testing the AK Steel sulfur dioxide emission factor for clean coke oven gas as determined by the performance test for EP 19.

d. See Condition 1. under SECTION D for clean coke oven gas combustion.

3. Testing Requirements: None

4. Specific Monitoring Requirements:
a. AK Steel shall determine the monthly fuel usage rate of each fuel combusted for the boiler. [401 KAR 61:015, Section 6 (3), Monitoring of Operations]
b. AK Steel shall monitor the visible emissions from the main boiler stack on a monthly basis using U.S. EPA Reference Method 9. [401 KAR 52:020, Section 10]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record keeping Requirements:

AK Steel shall retain records of the following for five years: [401 KAR 52:020, Section 10]

a. The amount of each fuel burned on a monthly basis.
b. The percentage of natural gas burned of the total heat input for the boiler on a monthly basis.
c. Monthly opacity observations.
d. The particulate emissions and SO_2 emissions per total heat input for each boiler based on the amount of each fuel burned on a monthly basis (see Section D, Condition 2).

6. Specific Reporting Requirements:

AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.

7. Specific Control Equipment Operating Conditions:

None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

24 (24)	**Excess Coke Oven Gas Flare**
Description:	Burn Clean Coke Oven Gas not used as fuel elsewhere in the plant
Rated Burner Capacity:	479.5 MMBtu/hour
Primary Fuel:	Clean Coke Oven Gas
Date constructed:	1975
Controls:	None (Clean coke oven gas uses Sulfiban for H_2S/SO_2 removal)

APPLICABLE REGULATIONS:
401 KAR 51:017, Prevention of Significant Deterioration of Air Quality- Applies to SO_2 and Particulate matter emissions.
401 KAR 63:015, Flares

1. Operating Limitations:
Pursuant to BACT/LEAR determination, Coke Oven Gas from Battery number 4 Throughput to the Flare shall not exceed:
a. 2,721,842 x 10^6 Btu's per year
b. 311 x 10^6 Btu's per hour

2. Emission Limitations:
a. There shall be no particulate emissions exceeding 20% opacity for more than 3 minutes in any 1 day. [401 KAR 63:015 (3)]

Compliance Demonstration Method:
Compliance will be determined by visible emissions testing.

b. See Condition 1. under SECTION D for clean coke oven gas combustion.

Excess Coke Oven Gas Flare For Battery # 4:
All coke oven gas produced by number 4 battery except for that fraction of the gas which is used to underfire number 4 battery. [Pursuant to BACT/LEAR determination]
c. 0.01 grains of filterable particulate matter per cubic foot of dry flue gas
The particulate emissions shall not exceed:
d. 0.85 lbs/hr
e. 0.00748 lbs/ton of coal processed

Compliance Demonstration Method:
PM emissions (lbs/hr) = coal charged No. 4 Battery (daily hourly average) X 0.00748 lb/ton of coal

3. Testing Requirements: None

4. Specific Monitoring Requirements:
AK Steel shall monitor Visible emissions from the flare on a monthly basis using U.S. EPA Reference Method 9 [401 KAR 52:020, Section 10]

5. Specific Record keeping Requirements:
a. AK Steel shall retain records of the monthly opacity observations for five years [401 KAR 52:020, Section 10]
b. Daily records of PM emission rate (lbs/hr) using hourly coal charged, averaged from daily basis.

6. Specific Reporting Requirements:
AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

26 (26)	**AC Still Thermal Oxidizer**
Description:	Incinerate concentrated ammonia stream from AC Still
Rated Burner Capacity:	25 MMBTU/hr
Primary Fuel:	Clean Coke Oven Gas and Natural Gas mixture
Date constructed:	1995
Controls:	None (Clean coke oven gas uses Sulfiban for H_2S/SO_2 removal)

APPLICABLE REGULATIONS:
401 KAR 52:020, Title V permits

1. Operating Limitations:
None

2. Emission Limitations:
a. See Condition 1. under SECTION D for clean coke oven gas combustion.
b. See Condition 12.under SECTION D for nitrogen oxides emission limit.

3. Testing Requirements:
a. Testing shall be conducted at such times as may be required by the Cabinet in accordance with 401 KAR 59:005 § 2(2) and 50:045 § 4.
b. A performance test shall be conducted to determine NO_x emissions (see section D, condition 12) from thermal destruct unit utilizing EPA Method 7. The performance test shall be conducted within 360 days of issuance of this permit. See Section F(11) and G(1)(q).

4. Specific Monitoring Requirements:
a. AK Steel shall determine the monthly fuel usage rate of coke oven gas in the thermal oxidizer.
b. AK Steel shall determine the monthly fuel usage rate of natural gas in the thermal oxidizer.
c. AK Steel shall monitor the combustion zone temperature once per shift.

5. Specific Record keeping Requirements:
AK Steel shall maintain records of the following information:
a. Monthly fuel usage rate of coke oven gas in the thermal oxidizer.
b. Monthly fuel usage rate of natural gas in the thermal oxidizer.
c. Monthly hours of operation of the thermal oxidizer.
d. Hourly NOx emission rate based on monthly fuel usage rate and average hours of operation using the following emission factors: 80 lbs NOx/MMCF for coke oven gas and 100 lbs NOx/MMCF for natural gas.
e. Combustion zone temperature once per shift.

6. Specific Reporting Requirements:
AK Steel shall report exceedances or deviations of all operating and emission limitations to the Division's Ashland Regional Office in accordance with Section F of this permit.

7. Specific Control Equipment Operating Conditions:
The unit shall be operated and maintained in accordance with the manufacturer's recommendations unless otherwise allowed in this permit.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Furnace Coke Byproducts Recovery Area

31-01 (31-01) Process Vessels
Description: Tar Decanters
Flushing Liquor Circulation Tanks
Light Oil Condensers
Light Oil Decanters
Wash Oil Decanters
Wash Oil Circulation Tanks
Date constructed: 1953
Controls: Positive Pressure Inert Gas Blanketing routed to Foul Gas Main

31-02 (31-02) Tar Storage Tanks
Description:
Date constructed: 1953
Controls: Positive Pressure Inert Gas Blanketing routed to Foul Gas Main

31-03 (31-03) Tar Intercepting Sumps
Description:
Date constructed: 1953
Controls: Positive Pressure Inert Gas Blanketing routed to Foul Gas Main

31-04 (31-04) Light Oil Storage Tanks
Description:
Date constructed: 1953
Controls: Positive Pressure Inert Gas Blanketing routed to Foul Gas Main

31-05 (31-05) Excess Ammonia Liquor Storage Tanks
Description:
Date constructed: 1953
Controls: Positive Pressure Inert Gas Blanketing routed to Foul Gas Main

APPLICABLE REGULATIONS:
401 KAR 57:002, incorporating by reference;
40 CFR 61, Subpart L, National Emission Standards for Benzene Emissions from Coke Byproduct Recovery Plants
40 CFR 61, Subpart FF, National Emission Standards for Benzene Waste Operations

1. **Operating Limitations:**
For each process vessel, tar storage tank, tar-intercepting sump, light oil storage tank, and excess ammonia liquor storage tank:

a. AK Steel shall enclose and seal all openings pursuant to 40 CFR 61.132 (a)(1), Standard: Process vessels, storage tanks, and tar-intercepting sumps.

b. AK Steel shall duct gases from each affected facility to the gas collection system, gas distribution system, or other enclosed point in the by-product recovery process where the benzene in the gas will be recovered or destroyed pursuant to 40 CFR 61.132 (a)(2), except that AK Steel may elect to:
   i. install, operate, and maintain:
      1) a pressure relief device
      2) a vacuum relief device
      3) an access hatch equipped with a gasket and a cover, seal, or lid that must be kept in a closed position at all times, unless in actual use
      4) a sampling port equipped with a gasket and a cover, seal, or lid that must be kept in a closed position at all times, unless in actual use
   ii. Leave open to the atmosphere the portion of the liquid surface in each tar decanter necessary to permit operation of a sludge conveyor and install, operate, and maintain a water leg seal on the tar decanter roof near the sludge discharge chute to ensure enclosure of the major portion of liquid surface not necessary for the operation of the sludge conveyor.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:
Compliance shall be demonstrated by continuous operation and maintenance of a positive pressure nitrogen gas blanketing system on these emission units.

c. AK Steel shall comply with the total annual benzene quantity from facility waste requirements in 40 CFR 61.342.

Compliance Demonstration Method:
Compliance shall be determined by review of facility records and results from tests and inspections using methods and procedures specified in 40 CFR 61.355.

2. Emission Limitations: None

3. Testing Requirements:

a. Pursuant to 40 CFR 61.137 (a), AK Steel shall follow the requirements of 40 CFR 61.245 (b)(1)-(4) and (c) when equipment is tested for compliance with no detectable emissions.

b. AK Steel shall comply with the test methods, procedures, and compliance provisions specified in 40 CFR 61.355.

4. Specific Monitoring Requirements:

a. Pursuant to 40 CFR 61.132 (b), AK Steel shall conduct the following monitoring and inspections semiannually and at any other time that the gas blanketing system is re-pressurized with blanketing gas following removal of the cover or opening of the access hatch:
   1. Monitor the connections and seals on the gas blanketing system to determine if it is operating with no detectable emissions (as indicated by an instrument reading of less than 500 PPM above background), using Reference Method 21 (40 CFR part 60, appendix A) and procedures specified in 40 CFR 61.245 (b)(1)-(4) and (c)
   2. Visually inspect each source, including sealing materials, for evidence of visible defects such as gaps or tears.
   3. Visually inspect the ductwork of the gas blanketing system for evidence of visible defects such as gaps or tears.

b. Pursuant to 40 CFR 61.132 (c), AK Steel shall conduct an annual maintenance inspection of the gas blanketing system for evidence of system abnormalities, such as blocked or plugged lines, sticking valves, plugged condensate traps, and other maintenance defects that could result in abnormal system operation.

c. A first attempt at repair of any leak, visible defect, or abnormality shall be made within 5 days, with repair within 15 days of detection.

d. AK Steel shall comply with the monitoring of operations requirements specified in 40 CFR 61.354.

5. Specific Record keeping Requirements:

a. Pursuant to 40 CFR 61.138 (a), Recordkeeping and reporting requirements, AK Steel shall maintain records of the following information pertaining to the design of the control equipment in a readily accessible location:
   1. Detailed schematics, design specifications, and piping and instrumentation diagrams.
   2. The dates and descriptions of any changes in the design specifications.

b. Pursuant to 40 CFR 61.138 (b), AK Steel shall maintain records of the following information for 5 years (See Condition 2. under SECTION F) following each semiannual (and other) inspection and each annual maintenance inspection:
   1. The date of the inspection and the name of the inspector.
   2. A brief description of each visible defect in the source or control equipment and the method and date of repair of the defect.
   3. The presence of a leak, as measured using the method described in 40 CFR 61.245(c). The record shall include the date of attempted and actual repair and method of repair of the leak.
   4. A brief description of any system abnormalities found during the annual maintenance inspection, the repairs made, the date of attempted repair, and the date of actual repair.

c. AK Steel shall comply with the recordkeeping requirements specified in 40 CFR 61.356.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Specific Reporting Requirements:

a. AK Steel shall submit semiannual reports (see General Condition 13 of Section D for reporting schedule) pursuant to 40 CFR 61.138 (f), Record keeping and Reporting Requirements, including the following information:
   i. A brief description of any visible defect in the source or ductwork
   ii. The number of leaks detected and repaired, and
   iii. A brief description of any system abnormalities found during each annual maintenance inspection that occurred in the reporting period and the repairs made.
   iv. A statement signed by the owner or operator stating whether all applicable provisions of 40 CFR 61, subpart L, have been fulfilled during the semiannual reporting period.
   v. Revisions to items reported according to 40 CFR 61.138 (e)(4) in the initial report if changes have occurred since the initial report or subsequent revisions to the initial report.

b. AK Steel shall comply with the reporting requirements specified in 40 CFR 61.357.

7. Specific Control Equipment Operating Conditions:

a. AK Steel shall design and operate this control system for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined by the methods specified in 61.245 (b)(1)-(4) and (c).

b. See condition 14 of section D

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Furnace Coke Byproducts Recovery Area
31-08 (31-08) Light Oil Sumps
Description:
Date constructed: 1953
Controls: Positive Pressure Inert Gas Blanketing routed to Foul Gas Main

APPLICABLE REGULATIONS:
40 CFR 61, Subpart L, National Emission Standards for Benzene Emissions from Coke Byproduct Recovery Plants
40 CFR 61, Subpart FF, National Emission Standards for Benzene Emissions from Benzene Waste Operations

1. Operating Limitations:
For each light oil sump:

a. AK Steel shall enclose and seal the liquid surface in the sump according to 40 CFR 61.133 (a), Standard: Light-Oil Sumps to form a closed system to contain the emissions, except that AK Steel may elect to install, operate, and maintain:
   i. a vent on the light oil sump cover equipped with a water leg seal, a pressure relief device, or vacuum relief device.
   ii. an access hatch on the light oil sump cover equipped with a gasket and a cover, seal, or lid that must be kept in a closed position at all times, unless in actual use
   iii. The light oil sump cover may be removed for periodic maintenance but must be replaced (with seal) at the completion of the maintenance operation.

Compliance Demonstration Method:
Tightly fitting permanent or removable cover with a gasket on the rim of the cover.
Access hatch equipped with a cover or lid
Vent in the sump cover equipped with a water leg seal, pressure-relief device, or vacuum-relief device

b. Pursuant to 40 CFR 61.133 (b), Standard: Light-Oil Sumps, AK Steel shall not vent steam or other gases from the byproducts process to any light oil sump.

Compliance Demonstration Method:
AK Steel has installed and operates a positive pressure nitrogen gas blanketing system on these emission units.

c. AK Steel shall comply with the total annual benzene quantity from facility waste requirements in 40 CFR 61.342.

Compliance Demonstration Method:
Compliance shall be determined by review of facility records and results from tests and inspections using methods and procedures specified in 40 CFR 61.355. AK Steel has previously demonstrated compliance.

2. Emission Limitations: None

3. Testing Requirements:
a. Pursuant to 40 CFR 61.137 (a), AK Steel shall follow the requirements of 40 CFR 61.245 (b)(1)-(4) and (c) when equipment is tested for compliance with no detectable emissions.
b. AK Steel shall comply with the test methods, procedures, and compliance provisions specified in 40 CFR 61.355.

4. Specific Monitoring Requirements:
Pursuant to 40 CFR 61.133 (c), AK Steel shall conduct the following monitoring and inspections semiannually and at any other time a light oil sump cover is removed.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

a. Monitor the connections and seals on each control system to determine if it is operating with no detectable emissions, using Reference Method 21 (40 CFR part 60, appendix A) and the procedures specified in 40 CFR 61.245 (b)(1)-(4) and (c)
b. Visually inspect each source, including sealing materials, for evidence of visible defects such as gaps or tears.
c. A first attempt at repair of any leak or visible defect shall be made within 5 days, with repair within 15 days of detection.
d. AK Steel shall comply with the monitoring of operations requirements specified in 40 CFR 61.354.

5. Specific Record keeping Requirements:

a. Pursuant to 40 CFR 61.138 (a), Recordkeeping and reporting requirements, AK Steel shall maintain records of the following information pertaining to the design of the control equipment in a readily accessible location:
   i. Detailed schematics, design specifications, and piping and instrumentation diagrams.
   ii. The dates and descriptions of any changes in the design specifications.

b. AK Steel shall comply with the recordkeeping requirements specified in 40 CFR 61.356.

6. Specific Reporting Requirements:

a. AK Steel shall submit semiannual reports (see General Condition 13. of Section D for reporting schedule) pursuant to 40 CFR 61.138 (f), Record keeping and Reporting Requirements, including the following information:
   i. A brief description of any visible defect in the source or control equipment
   ii. The number of leaks detected and repaired, and
   iii. A statement signed by the owner or operator stating whether all applicable provisions of 40 CFR 61, subpart L, have been fulfilled during the semiannual reporting period.
   iv. Revisions to items reported according to 61.138 (e)(4) in the initial report if changes have occurred since the initial report or subsequent revisions to the initial report.
b. AK Steel shall comply with the reporting requirements specified in 40 CFR 61.357.

7. Specific Control Equipment Operating Conditions:

See Condition 14 of Section D

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Furnace Coke Byproducts Recovery Area
In-Benzene-Service Equipment

31-12	**Pumps**
31-13	**Valves**
31-14	**Open-Ended Valves and Lines**
31-15	**Pressure-Relief Devices in Gas/vapor Service**
31-16	**Pressure-Relief Devices in Liquid Service**
31-17	**Sampling Connections**
31-18	**Flange or other Connector**

Description:
Date constructed: 1953
Controls: Good management practices

APPLICABLE REGULATIONS:
40 CFR 61, Subpart L, National Emission Standards for Benzene Emissions from Coke Byproduct Recovery Plants
40 CFR 61, Subpart V, National Emission Standards for Equipment Leaks (Fugitive Emission Sources)

1. Operating Limitations:

For All Equipment:

a. Pursuant to 40 CFR 61.135 (a), Standard: Equipment leaks, and 40 CFR 61.242-1 (a), AK Steel shall demonstrate compliance with the requirements of 61.242-1, 61.242-2, 61.242-4, 61.242-5, 61.242-6, 61.242-7, and 61.242-8 for each new and existing source as required in 40 CFR 61.05, except as provided in 61.243 and 61.244.

Compliance Demonstration Method:
Compliance is determined by a Leak Detection and Repair (LDAR) program that complies with all applicable requirements of 40 CFR 61 Subparts L and V.
Pursuant to 40 CFR 242-1 (b), compliance will be determined by review of records, review of performance test results, and inspection using the methods and procedures specified in 61.245.

b. Pursuant to 40 CFR 61.135 (c), Standard: Equipment leaks, and 40 CFR 242-1(d), each piece of equipment in benzene service to which 40 CFR 61 Subparts L and V apply shall be marked in such a manner such that it can be distinguished readily from other pieces of equipment in benzene service.

Compliance Demonstration Method:
Compliance will be determined by maintaining a list of each piece of equipment tagged as being in benzene service.

For Open-Ended Valves and Lines:

c. Pursuant to 40 CFR 61.242-6 (a), Standards: Open-ended valves or lines, each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 61.242-1(c) for alternative means of emission limitations. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.
   (1) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.
   (2) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) at all other times.

For Pressure Relief Devices In Gas/Vapor Service:
Pursuant to 40 CFR 61.135 (a) and (b), Standard: Equipment leaks, and 61.242-4 (a) and (b), Standards: Pressure relief devices in gas/vapor service, each pressure relief device in gas/vapor service shall be operated with no detectable emissions except during pressure releases. After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 61.242-10, Standards: Delay of repair.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:
Compliance will be determined by a Leak Detection and Repair (LDAR) program that complies with all applicable requirements of 40 CFR 61 Subparts L and V.

For Sampling Connection Systems:

d. Pursuant to 40 CFR 61.242-5 (a) and (b), Standards: Sampling connecting system, each sampling connection system shall be equipped with a closed-purge system or closed vent system, except as provided in 61.242-1(c) for alternative means of emission limitations. Each closed-purge system or closed-vent system shall:
   (1) Return the purged process fluid directly to the process line with zero VHAP emissions to the atmosphere
   (2) Collect and recycle the purged process fluid with zero VHAP emissions to atmosphere, or
   (3) Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of 61.242-11.

Compliance Demonstration Method:
Compliance will be determined by a Leak Detection and Repair (LDAR) program that complies with all applicable requirements of 40 CFR 61 Subparts L and V.

2. Emission Limitations:
There are no specific emission limitations for this unit.

Compliance Demonstration Method:
Compliance will be determined by a Leak Detection and Repair (LDAR) program that complies with all applicable requirements of 40 CFR 61 Subparts L and V.

3. Testing Requirements:
Monitoring Pumps, Valves, and Pressure Relief Devices in Gas/vapor Service for Compliance:

a. Pursuant to 40 CFR 61.137 (a), AK Steel shall follow the requirements of 40 CFR 61.245 (b)-(c) when equipment is tested for compliance with no detectable emissions with Method 21 of appendix A of 40 CFR part 60.

All Equipment:

b. Pursuant to 40 CFR 61.137 (b), Test methods and procedures, the methods in 61.245(d) shall be used to determine whether or not a piece of equipment is in benzene service. Each piece of equipment within a process unit that can conceivably contain equipment in VHAP service is presumed to be in VHAP service unless AK Steel demonstrates that the piece of equipment is not in VHAP service. For a piece of equipment to be considered not in VHAP service, it must be determined that the percent VHAP content can be reasonably expected never to exceed 10 percent by weight.
   For purposes of determining the percent VHAP content of the process fluid that is contained in or contacts equipment, the permittee shall use:
   (1) procedures that conform to the methods in ASTM Method D-2267, or
   (2) (i) engineering judgment that demonstrates that the VHAP content clearly does not exceed 10 percent by weight
   (ii) When AK Steel and the Division do not agree on whether a piece of equipment is not in VHAP service, however, procedures that conform to the methods in ASTM Method D-2267 shall be used.
   (iii) If AK Steel determines that a piece of equipment is in VHAP service, the determination can be revised only after following procedures that conform to the methods in ASTM Method D-2267.
   (3) Samples used in determining the percent VHAP content shall be representative of the process fluid that is contained in or contacts the equipment.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

For Pumps:

Pursuant to 40 CFR 61.135 (a) and (b), Standard: Equipment leaks, and 40 CFR 61.242-2 Standards: Pumps:

a. Each pump shall be monitored monthly pursuant to 40 CFR 61.242-2 (a)(1), Standards: Pumps, to detect leaks by the methods specified in 61.245 (b) and (c), except as provided in 61.242-1(c) and paragraphs (d), (e), and (f) of this section.
b. Each pump shall be checked by visual inspection each calendar week pursuant to 40 CFR 61.242-2 (a)(2), Standards: Pumps, for indications of liquids dripping from the pump seal.
c. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 61.242-10, Standards: Delay of repair.
d. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
e. Pursuant to 40 CFR 61.242-10 (d), Standards: Delay of repair, delay of repair for pumps will be allowed if:
    1. The repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and
    2. The repair is completed as soon as practicable, but not later than 6 months after the leak was detected.
f. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system that meets the requirements in 40 CFR 61.242-2 (d)(1)-(3) is exempt from the monitoring requirements of 40 CFR 61.242-2 (a) and (b), provided the following requirements of 40 CFR 61.242-2 (d)(4)-(6) are met:
    - Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seal pursuant to 40 CFR 61.242-2 (d)(4). If there are indications of liquid dripping from the pump seal at the time of the weekly inspection, the pump shall be monitored as specified in 40 CFR 61.245 to determine the presence of VOC and VHAP in the barrier fluid.
g. Each sensor as described in 40 CFR 61.242-2 (d)(3) is checked daily or is equipped with an audible alarm.
h. (i) The owner or operator determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both.

    (ii) If indications of liquids dripping from the pump seal exceed the criteria established in 40 CFR 61.242-2(d)(6)(i), or if, based on the criteria established in 40 CFR 61.242-2 (d)(6)(i), the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.

    (iii) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in 61.242-10.

    (iv) A first attempt at repair shall be made no later than five calendar days after each leak is detected.
i. Pursuant to 40 CFR 61.242-2 (e), any pump that is designated, as described in 40 CFR 61.246(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the monitoring and leak repair requirements of 40 CFR 61.242-2 (a), (c), and (d) if the pump:
    1. Has no externally actuated shaft penetrating the pump housing,
    2. Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in 40 CFR 61.245 (c), and
    3. Is tested for compliance with 40 CFR 61.242-2 (e)(2) initially upon designation, annually, and at other times requested by the Division.

For Valves:

For Pressure Relief Devices In Gas/vapor Service:

Pursuant to 40 CFR 61.135 (a) and (b), Standard: Equipment leaks, and 40 CFR 61.242-4 (b)(2), Standards: Pressure relief devices in gas/vapor service, no later than 5 calendar days after a pressure release, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in 40 CFR 61.245(c).

For Pressure Relief Devices In Liquid Service, Flanges, other Connectors:

Pursuant to 40 CFR 61.242-8 Standards: Pressure relief services in liquid service and connectors.

(a) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method, AK Steel shall follow either one of the following Procedures, except as provided in 40 CFR 61.242-1(c):

1. Ak Steel shall monitor the equipment within 5 days by the method specified in 40 CFR 61.245(b) and shall comply with the requirements of paragraphs (b) through (d) of this section.
2. AK Steel shall eliminate visual, audible, olfactory, or other indication of a potential leak.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
(c) (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 61.242-10, Standards: Delay of repair.
(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
(d) First attempts at repair include, but are not limited to, the best practices described under 40 CFR 61.242-7(e).

Monitoring Pumps, Valves, and Pressure Relief Devices in Gas/vapor Service for No Detectable Emissions:
When equipment is monitored for no detectable emissions, AK Steel shall comply with the requirements of Method 21 of appendix A of 40 CFR part 60 and 40 CFR 61.245 (b) and (c), Monitoring.

Delay of Repair Standards For All Equipment:
Pursuant to 40 CFR 61.242-10 Standards: Delay of repair, delay of repair of equipment for which leaks have been detected will be allowed if:
1. The repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.
2. The equipment is isolated from the process and does not remain in VHAP service.

Exempt Equipment:
a. Pursuant to 40 CFR 61.242-2 (f), if any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of 40 CFR 61.242-11, it is exempt from the requirements of 40 CFR 61.242-2 (a)-(e).
b. Any valve that is designated, as described in 40 CFR 61.246(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of §61.242-7 (a) if the valve:
   (1) Has no external actuating mechanism in contact with the process fluid;
   (2) Is operated with emissions less than 500 ppm above background, as measured by the method specified in 40 CFR 61.245(c); and
   (3) Is tested for compliance with paragraph (f)(2) initially upon designation, annually, and at other times requested by the Administrator.
c. Any valve that is designated, as described in 40 CFR 61.246(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of §61.242-7 (a) if:
   (1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a); and
   (2) The owner or operator of the valve has a written plan that requires monitoring of the valve as frequent as practicable during safe-to-monitor times.
d. Any valve that is designated, as described in 40 CFR 61.246(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) if:
   (1) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface;
   (2) The process unit within which the valve is located is an existing process unit; and
   (3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

e. Pursuant to 40 CFR 61.242-4 (c), any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in 40 CFR 61.242-11 is exempt from the monitoring requirements of 40 CFR 61.242-4 (b)(2) listed above.

5. Specific Recordkeeping Requirements:
a. Pursuant to 40 CFR 61.138 (c) and 40 CFR 61.246 (e), AK Steel shall maintain a log that is kept in a readily accessible location of the following information pertaining to all equipment to which a standard applies:
   1. A list of identification numbers for equipment (except welded fittings)
   2. A list of identification numbers for equipment that AK Steel elects to designate for no detectable emissions as indicated by an instrument reading of less than 500 ppm above background. The designation of this equipment for no detectable emissions shall be signed by AK Steel.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. A list of equipment identification numbers for non-exempt pressure relief devices in gas/vapor service.
4. A list of identification numbers for equipment in vacuum service.
5. A list of the following information pertaining to compliance tests for pumps, valves, and exhausters designated for no detectable emissions 40 CFR 61.242-2(e), 61.242-7(f), 61.135(g), and pressure relief devices in gas/vapor service 40 CFR 61.242-4.
    1) The dates of each compliance test
    2) The background level measured during each compliance test, and
    3) The maximum instrument reading measured at the equipment during each compliance test.
6. The following information used in determining exemptions:
    1) An analysis demonstrating the design capacity of the process unit, and
    2) An analysis demonstrating that equipment is not in VHAP service.
7. Information and data used to demonstrate that a piece of equipment is not in VHAP service.
8. Pursuant to 40 CFR 61.246 (h), the following information for pumps:
    1) Design criterion required in 40 CFR 61.242-2(d)(5), 61.242-3(e)(2), and an explanation of the design criterion; and
    2) Any changes to this criterion and the reasons for the changes.
9. Pursuant to 40 CFR 61.246 (f), the following information pertaining to all valves subject to the requirements of 40 CFR 61.242-7(g) and (h):
    1) A list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve.
    2) A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.
10. Pursuant to 40 CFR 61.246 (g), the following information for valves complying with 40 CFR 61.243-2 for alternative monitoring for valves in VHAP service:
    1) A schedule of monitoring.
    2) The percent of valves found leaking during each monitoring period.
11. Pursuant to 40 CFR 61.246 (a)(2), AK Steel may maintain one recordkeeping system if the system identifies each record by each process unit.

6. <u>Specific Reporting Requirements</u>:

a. AK Steel shall submit semiannual reports (see General Condition 13. of Section D for reporting schedule) pursuant to 40 CFR 61.138 (f), Record keeping and Reporting Requirements, including the following information:

- Pursuant to 61.247(b):
    1) Process unit identification
    2) For each month during the semiannual reporting period,
        (a) Number of valves for which leaks were detected as described in 40 CFR 61.242-7(b) of 40 CFR 61.243-2.
        (b) Number of valves for which leaks were not repaired as required in 40 CFR 61.242-7(d).
        (c) Number of pumps for which leaks were detected as described in 40 CFR 61.242-2(b) and (d)(6).
        (d) Number of pumps for which leaks were not repaired as required in 40 CFR 61.242-2(c) and (d)(6).
        (e) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible.
    3) Dates of process unit shutdowns which occurred within the semiannual reporting period.
    4) The results of all performance tests and monitoring to determine compliance with no detectable emissions and with 40 CFR 61.243-1 and 61.243-2, for alternative emission limitations for valves in VHAP service, conducted within the semiannual reporting period.
    5) Revisions to items reported according to 40 CFR 61.138 (e)(4) in the initial report if changes have occurred since the initial report or subsequent revisions to the initial report.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. Pursuant to 40 CFR 61.138 (h), an owner or operator electing to comply with the provisions of 40 CFR 61.243-1 and 61.243-2 for alternative emission limitations for valves in VHAP service shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.
c. An owner or operator of any piece of equipment to which this subpart applies shall submit a statement in writing notifying Ashland Regional Office that the requirements of 40 CFR 61.242, 61.245, 61.246, and 61.247 are being implemented. [40 CFR 61.247]

For New Equipment:

d. Pursuant to 40 CFR 61.138 (i) and 40 CFR 61.247 (e), an application for approval of construction or modification, as required under 40 CFR 61.5(a) and 40 CFR 61.7, will not be required for sources subject to 40 CFR 61.135 if:
    1. The new source complies with 40 CFR 61.135 and 61.242
    2. The new source is not part of the construction of a new process unit, and
    3. In the next semiannual report, the following information described in 40 CFR 61.138(e)(4) and 61.247 (a)(4) is reported for each source:
        i) equipment identification number and process unit identification
        ii) type of equipment
        iii) percent by weight benzene or VHAP, as applicable, in the fluid at the equipment, and
        iv) process fluid state (gas/vapor or liquid) in the equipment.
        v) method of compliance
e. Pursuant to 40 CFR 61.247 (a), AK Steel shall submit a statement in writing submitted with the application for approval of construction described in 40 CFR 61.07 notifying the Division that the requirements of 40 CFR 61.242, 61.245, 61.246, and 61.247 are being implemented for new piece of equipment to which this subpart applies. The statement is to contain the following information for each source:
    1. Equipment identification number and process unit identification
    2. Type of equipment
    3. Percent by weight VHAP in the fluid at the equipment
    4. Process fluid state at the equipment (gas/vapor or liquid), and
    5. Method of compliance with the standard.

7. Specific Control Equipment Operating Conditions:
See Condition 14 of Section D

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Furnace Coke Byproducts Recovery Area -In-Benzene-Service Equipment

31-19 Exhausters
#1 Exhauster
#2 Exhauster
#3 Exhauster

Description:
Date constructed: 1969
Controls: Good management practices

APPLICABLE REGULATIONS:
401 KAR 57:002, incorporating by reference 40 CFR 61, Subpart L, National Emission Standards for Benzene Emissions from Coke Byproduct Recovery Plants
401 KAR 57:002, incorporating by reference 40 CFR 61, Subpart V, National Emission Standards for Equipment Leaks (Fugitive Emission Sources)

1. Operating Limitations:

a. Pursuant to 40 CFR 61.135 (a), Standard: Equipment leaks, the permittee shall comply with the applicable requirements of 40 CFR 61, Subpart V.

Compliance Demonstration Method:

Use leakless equipment to achieve a no detectable emission limit (i.e. 500 ppmv over background), or
Use enclosed seal areas vented to a control device designed to operate at 95% benzene-control efficiency, or
Use seals with barrier-fluid system.

b. Pursuant to 40 CFR 61.135 (c), Standard: Equipment leaks, and 40 CFR 242-1(d), each piece of equipment in benzene service to which 40 CFR 61 Subparts L and V apply shall be marked in such a manner such that it can be distinguished readily from other pieces of equipment in benzene service.

Compliance Demonstration Method:

Quarterly inspections to verify that exhausters are properly marked.

2. Emission Limitations: None

3. Testing Requirements:

a. Pursuant to 40 CFR 61.137 (a), AK Steel shall follow the requirements of 40 CFR 61.245 (b)-(c) when equipment is tested for compliance with no detectable emissions with Method 21 of appendix A of 40 CFR part 60.
b. Pursuant to 40 CFR 61.137 (b), Test methods and procedures, to determine whether or not a piece of equipment is in benzene service, the methods in 40 CFR 61.245(d) shall be used, except that, for exhausters, the percent benzene shall be 1 percent by weight, rather than the 10 percent by weight described in 40 CFR 61.245(d).

4. Specific Monitoring Requirements:

a. Pursuant to 40 CFR 61.135 (d), Standard: Equipment Leaks, each exhauster shall be monitored quarterly to detect leaks by the methods specified in 40 CFR 61.245(b) except as provided in 40 CFR 61.136(d) for alternative means of emission limitation, and 40 CFR 61.135 (e)-(g) under Exempt Exhausters below.
    1. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
    2. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in 61.242-10 (a) and (b), Standards: Delay of repair. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. Delay of Repair Standards For All Equipment: Pursuant to 40 CFR 61.242-10 Standards: Delay of repair, delay of repair of equipment for which leaks have been detected will be allowed if:
   1. the repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.
   2. the equipment is isolated from the process and does not remain in VHAP service.

c. Pursuant to 40 CFR 61.245 (b), Monitoring, as required in 40 CFR 61.135, shall comply with the following requirements:
   1. Monitoring shall comply with Method 21 of appendix A of 40 CFR part 60.
   2. The detection instrument shall meet the performance criteria of Reference Method 21.
   3. The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.
   4. Calibration gases shall be:
   5. Zero air (less than 10 ppm of hydrocarbon in air); and
   6. A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.
   7. The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

5. Specific Record keeping Requirements:

a. AK Steel shall keep readily accessible all information required in 40 CFR 61.138 (a) and (c), Record keeping and Reporting Requirements, and 40 CFR 61.246 (c) and (e), Record keeping Requirements.
b. See Condition 2. under SECTION F.
c. The following information pertaining to all equipment to which a standard applies shall be recorded in a log that is kept in a readily accessible location
   1. A list of identification numbers for equipment (except welded fittings).
   2. A list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions as indicated by an instrument reading of less than 500 ppm above background.
   3. The designation of this equipment for no detectable emissions shall be signed by the owner or operator.
   4. The dates of each compliance test required in 40 CFR 61.242-4, 61.242-7(f), and 61.135(g).
   5. The background level measured during each compliance test

6. Specific Reporting Requirements:

a. AK Steel shall submit semiannual reports (see General Condition 13. of Section D for reporting schedule) pursuant to 40 CFR 61.138 (f), Record keeping and Reporting Requirements, including the following information:
   1. The following information required by 61.247(b)
      i. Process unit identification
      ii. For each month during the semiannual reporting period,
         (a) Number of valves for which leaks were detected as described in 40 CFR 61.242-7(b) of 40 CFR 61.243-2.
         (b) Number of valves for which leaks were not repaired as required in 40 CFR 61.242-7(d).
         (c) Number of pumps for which leaks were detected as described in 40 CFR 61.242-2(b) and (d)(6).
         (d) Number of pumps for which leaks were not repaired as required in 40 CFR 61.242-2(c) and (d)(6).
         (e) Number of compressors for which leaks were detected as described in 40 CFR 61.242-3(f).
         (f) Number of compressors for which leaks were not repaired as required in 40 CFR 61.242-3(g).
         (g) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible.
      iii. Dates of process unit shutdowns which occurred within the semiannual reporting period.
      iv. Revisions to items reported according to 61.247 (a) if changes have occurred since the initial report or subsequent revisions to the initial report.
      v. The results of all performance tests and monitoring to determine compliance with no detectable emissions and with 40 CFR 61.243-1 and 61.243-2 conducted within the semiannual reporting period.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. The following information for each quarter during the semiannual reporting period,
   i. The number of exhausters for which leaks were detected as described in 40 CFR 61.135(d) and (e)(5),
   ii. The number of exhausters for which leaks were repaired as required in 40 CFR 61.135(d) and (e)(6),
   iii. The results of performance tests to determine compliance with 40 CFR 61.135(g) conducted within the semiannual reporting period.
   iv. A statement signed by the owner or operator stating whether all provisions of 40 CFR 61, subpart L, have been fulfilled during the semiannual reporting period.
3. Revisions to items reported according to 40 CFR 61.138 (e)(4) in the initial report if changes have occurred since the initial report or subsequent revisions to the initial report.

b. Pursuant to 40 CFR 61.138 (h), An owner or operator electing to comply with the provisions of 40 CFR 61.243-1 and 61.243-2 shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.

c. Pursuant to 40 CFR 61.138 (i), an application for approval of construction or modification, as required under 40 CFR 61.5(a) and 40 CFR 61.7, will not be required for sources subject to 40 CFR 61.135 if:
   1. The new source complies with 40 CFR 61.135, and
   2. In the next semiannual report, the following information described in 40 CFR 61.138(e)(4) is reported for each source:
      i. equipment identification number and process unit identification
      ii. percent by weight benzene in the fluid at the equipment, and
      iii. process fluid state (gas/vapor or liquid) in the equipment.

7. Specific Control Equipment Operating Conditions:

When a leak is detected in 3. above, repairs shall be made as soon as practicable within 15 calendar days after detection, except as provided for in 40 CFR 61.242-10, Standards: Delay of Repair, for equipment leaks, with a first attempt at repair (as specified in 40 CFR 61.242-7 (e) for 40 CFR 61.242-7, Standards: Valves, and 40 CFR 61.242-8, Standards: Pressure Relief Devices In Liquid Service and Flanges and Other Connectors) made within 5 calendar days of detection.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

36 (36)	**No. 3 Battery Emergency Flares**
Description:	2 flares
Design Capacity:	11,750 dscfm of Raw Coke Oven Gas per flare
Primary Fuel:	Natural Gas
Date constructed:	March 1994
Controls:	None

37 (37)	**No. 4 Battery Emergency Flares**
Description:	4 flares
Design Capacity:	15,670 dscfm of Raw Coke Oven Gas per flare
Primary Fuel:	Natural Gas
Date constructed:	March 1994
Controls:	None

APPLICABLE REGULATIONS:
40 CFR 63, Subpart L, National emission standards for coke oven batteries
401 KAR 63:015, Flares

1. Operating Limitations:

a. AK Coke shall operate and properly maintain a bypass/bleeder stack flare system. The flare system for each battery shall control 120% of normal gas flow from that battery. [40 CFR 63:307 (a)(1), Standards for Bypass/Bleeder Stacks]

Compliance Demonstration Method:
Compliance is demonstrated by flare design and manufacturer's specifications.

b. Flares shall meet the following specifications in 40 CFR 63.307 (b)(1), Standards for Bypass/Bleeder Stacks:
   i. Net heating value for air-assisted flare is 240 Btu/scf.

Compliance Demonstration Method:
Compliance has been previously demonstrated.

   ii. Each flare shall have a continuously-operable pilot flame [40 CFR 63.307 (b)(2), Standards for Bypass/Bleeder Stacks]

Compliance Demonstration Method:
Compliance is determined by presence of a thermocouple. [40 CFR 63.309 (h)(2), Performance Test and Procedures]

c. Coke oven emissions shall not be vented to the atmosphere through bypass/bleeder stacks except through the flare system. [40 CFR 63:307 (a)(2), Standards for Bypass/Bleeder Stacks]

Compliance Demonstration Method:
Compliance will be determined by review of records and inspections. [40 CFR 63.309 (g)]

2. Emission Limitations:

a. There shall be no visible emissions, as determined by the methods specified in 40 CFR 63.309(h)(1), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. [40 CFR 63:307 (c), Standards for Bypass/Bleeder Stacks]

Compliance Demonstration Method:
Compliance will be determined by review of records and inspections pursuant to 40 CFR 63.309 (g).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. There shall be no particulate emissions exceeding 20% opacity for more than 3 minutes in any 1 day. [401 KAR 63:015 (3)]

Compliance Demonstration Method:
Compliance will be determined by visible emissions testing, upon request.

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Record keeping Requirements:
AK Coke shall maintain records for the flare system on bypass/bleeder stacks, including, the design drawings and engineering specifications for the system, as required by 40 CFR 63.311(f)(5).

6. Specific Reporting Requirements:
a. The permittee shall report to the Division as soon as practicable within 24 hours of venting coke oven gas other than through the flare system, and submit a written report within 30 days. [40 CFR 63.311 (e), Reporting and Record keeping Requirements.]
b. See Condition 6. under Section F.

7. Specific Control Equipment Operating Conditions: None

8. Compliance Certification Requirements:
a. See Condition 6. under Section D.
b. See Condition 7. under Section D.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

39 (39) **No. 1 Clark Compressor Coke Oven Gas Combustion**
Description:
Primary Fuel: Clean Coke Oven Gas
Date constructed: 1953
Controls: Clean coke oven gas uses Sulfiban for H_2S/SO_2 removal

40 (40) **No. 2 Clark Compressor Coke Oven Gas Combustion (Back-up for No.1)**
Description:
Primary Fuel: Clean Coke Oven Gas
Date constructed: 1953
Controls: Clean coke oven gas uses Sulfiban for H_2S/SO_2 removal

APPLICABLE REGULATIONS:
401 KAR 61:140, Existing By-Product Coke Manufacturing Plants, for coke oven gas combustion

1. **Operating Limitations:** None

2. **Emission Limitations:**
   See Condition 1. under Section D for clean coke oven gas combustion.

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Record keeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

Description	Regulation
1. 1.5 million gallon Equalization Tanks	401 KAR 59:010
2. 10,000 gallon Dustbond Tank near Equalization Tank	401 KAR 59:010
3. Oil/water separation inside Tar Storage Tank dike	N/A
4. 14,000 gallon 20% Caustic Soda Storage Tank	N/A
5. 5,000 gallon Fuel Oil Storage Tank near former Ministerstein Building	401 KAR 59:010
6. 5,000 gallon Surfactant Storage Tank (by Coal Handler)	401 KAR 59:010
7. 5,000 gallon tank by Ministerstein Scrubber	N/A
8. 1,000 gallon Nalco Storage Tank near Tar Decanter	401 KAR 59:010
9. 1,000 gallon Storage Tank-Chemtreat near Boiler house	401 KAR 59:010
10. 2,000 gallon Storage Tank-Chemtreat near Boiler House	401 KAR 59:010
11. Tar decanter sludge/coal mixing area	401 KAR 63:010
12. Veolia Water 10,000 gallon 25% HCl Acid Storage Tank	401 KAR 59:010
13. Veolia Water 10,000 gallons used HCl Acid Storage Tank	401 KAR 59:010
14. Veolia Water Two – 16,000 gallon NaOH Storage Tanks	401 KAR 59:010
15. 40,000 gallon oil/water separation near Equalization Tank	401 KAR 59:010
16. 17,000 gallon Bulk Density Oil Control Tank	N/A
17. 500 gallon used oil tank by Maintenance	N/A
18. Naphthalene Sump Storage Tank	N/A
19. Various sized cold solvent cleaners	401 KAR 59:185
20. Mobile emergency generator by tar processing area	N/A
21. Mobile emergency generator by main flare stack	N/A
22. Veolia Water AC Still Emergency NAO Flare (Emission Point 27)	N/A
23. Veolia Water Bio Reactors (Emission Point 29)	N/A
24. Veolia Water Lime Silo (Emission Point 30)	401 KAR 59:010
25. Main Cooling Tower	401 KAR 59:010
26. Sulfiban Cooling Tower	401 KAR 59:010
27. Byproducts Cooling Tower	401 KAR 59:010
28. Mid Continent Coke screening operation	401 KAR 63:010
29. Tar Transport Loading-(Rail)	401 KAR 59:010
30. Light Oil and Tar Transport Loading-(Truck)	401 KAR 59:010
31. Mid Continent 214 HP diesel generator	401 KAR 59:010

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. **Emission Limitation for Clean Coke Oven Gas and Tailgas Combustion:**
Coke oven gas shall not be burned or discharged unless its concentration of sulfur compounds will result in emissions of equivalent SO_2 from all affected facilities (including the Claus sulfur recovery unit) of not more than 95 lb/MMCF coke oven gas produced, except during periods of maintenance outage or malfunction of the Sulfiban System. [401 KAR 61:140(4), Standard for Sulfur Dioxide]
Compliance Demonstration Method:
Compliance will be determined source-wide for all affected facilities using the following equation with values determined by an initial compliance demonstration test, material balance and daily parametric monitoring of the Sulfiban:

$$\frac{lb\ SO_2}{MMCF\ \ raw\ \ COG\ \ produced} = Total\ \ Inlet\ \ Sulfur\ \left(\frac{lb\ SO_2}{MMCF}\right) - \frac{Total\ Solid\ Sulfur\ (lb\ SO_2)}{MMCF\ \ RCOG}$$

2. **Emission Limitation for EP 20, 21, 22, and 23:**
Total heat input from natural gas (H_{NG}) to the boilers (20,21,22,23) shall not exceed 657,000 MMBtu/yr (equivalent to 15% of the total boiler annual capacity), based on a 12-month rolling total, in order to preclude applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality.
Compliance Demonstration Method:
Compliance will be determined monthly by monitoring and calculations using the following equation:

$$H_{NG} = \sum[\, R_{NG,EP\,20} + R_{NG,EP\,21} + R_{NG,EP\,22} + R_{NG,EP\,23}\ \left(\frac{MMCF}{mo}\right)] * \left(\frac{scf}{CF}\ \ conversion\right) * FHV_{NG,AVG}\ \left(\frac{Btu}{dscf}\right)$$

Where H_{NG} = Annual total heat input from natural gas, (MMBtu/yr)
$R_{NG,EP}$ = Monthly natural gas usage at each boiler, (MMCF/month), for previous 12 months
FHV_{NG} = Measured fuel heating value (gross calorific value) of natural gas for that month, (Btu/dscf)

Specific Reporting Requirements:
AK Steel shall submit the compliance calculations of annual heat input semi-annually with the reports required in Condition 5. of SECTION F.

3. **40 CFR 63, Subpart L Performance Tests**

a. The Division shall contract with Certified Observers to conduct daily inspections of the charging operation, doors, topside port lids and offtake systems, and collecting main, according to Method 303 of Appendix A to Part 63, as required by 40 CFR 63.309 (a).
b. AK Steel shall pay an inspection fee to the Division each calendar quarter, or on an alternative schedule to be agreed upon by the Division and AK Steel, to defray the costs of the daily performance tests. The daily inspection fee shall be determined according to Equation 3 in 40 CFR 63.309 (a)(4)(i) for 2 coke oven batteries.
c. During any time period in which EPA becomes the enforcement agency, the permittee shall comply with the requirements of 40 CFR 63.309 (a)(5).
d. Since the determination of whether a malfunction actually occurred is made later, observations should be made during an event that may be a malfunction, unless safety concerns dictate otherwise.
e. No observations obtained during any program for training or for certifying observers under 40 CFR 63, Subpart L, shall be used to determine compliance with the requirements of this subpart or any other federally-enforceable standard.

4. **Coke Oven Battery Startup, Shutdown, and Malfunction Requirements**
AK Steel shall follow all requirements in 40 CFR 63.310, Requirements for Startups, Shutdowns, and Malfunctions, including, but not limited to, the following Conditions:

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

a. At all times including periods of startup, shutdown, and malfunction, AK Steel shall operate and maintain the coke oven battery and its pollution control equipment required under this subpart, in a manner consistent with good air pollution control practices for minimizing emissions to the levels required by any applicable performance standard under this subpart. Failure to adhere to the requirement of this paragraph shall not constitute a separate violation if a violation of an applicable performance or work practice standard has also occurred.
b. AK Steel shall develop and implement a written startup, shutdown, and malfunction plan for the coke oven batteries and associated air pollution control equipment according to the requirements in 40 CFR 63.310 (b) and 40 CFR 63.7310 (c).
c. During a period of startup, shutdown, or malfunction:
   i. AK Steel shall operate the coke oven battery and associated air pollution control equipment in accordance with the procedures specified in the startup, shutdown, and malfunction plan.
   ii. Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the plan.
d. AK Steel shall notify the certified observer (if at the facility during the occurrence) or the in writing to the Division within 24 hours of first documentation of a startup, shutdown, or malfunction of the coke oven batteries or associated air pollution control equipment, and submit a written report within 14 days of notification.
e. AK Steel shall maintain records as required in 40 CFR 63.310 (f).
f. AK Steel shall submit a semiannual compliance certification that a startup, shutdown, or malfunction did not occur during the 6-month reporting periods ending May 15 and November 15 of each year, or that a startup, shutdown, or malfunction did occur and that a report was submitted.
g. Any performance testing observation occurring during a startup, shutdown, or malfunction shall not be considered a violation of any relevant requirements in 40 CFR 63.300, National Emission Standards for Coke Oven Batteries, be used in any compliance determination under 40 CFR 63.309, Performance Test and Procedures, or be considered for use of the work practice standards under 40 CFR 63.306, Work Practice Standards. Written notification by the Division that a startup, shutdown, or malfunction has not occurred will serve as written notification from the certified observer that an exceedance has occurred under 40 CFR 63.306, Work Practice Standards.

5. **Work Practice Standards**

Pursuant to 40 CFR 63.306, Work Practice Standards, AK Steel shall submit to the Division, within 30 days of issuance of the final permit, a written emission control work practice plan designed to achieve compliance with visible emission limitations for coke oven doors, topside port lids, offtake systems, and charging operations.

a. The plan shall contain all components specified in 40 CFR 63.306 (b).
b. Implementation of work practice plan requirements:
   i. For Battery 3 (EP 6,7,8)--AK Steel shall implement the applicable provisions of the work practice plan by no later than 3 days after receipt of written notification from the Division of a second exceedance in any consecutive 6-month period at a particular emission point of a federally-enforceable emission limit and until 90 consecutive days after the most recent written notification from the Division of an exceedance of the visible emission limit.
   ii. For Battery 4 (EP 12,13,14)--AK Steel shall implement the applicable provisions of the work practice plan by no later than 3 days after receipt of written notification from the certified observer of a second independent [as defined in 40 CFR 63.309 (c)(1)(I)] exceedance in any consecutive 6-month period at a particular emission point, and until the visible emission limit is achieved for 90 consecutive days. Exceedances prior to the beginning of the 90 days shall not be included in any determination to implement the work practice plan.
   iii. The permittee shall maintain records of all information required in 40 CFR 63.311 (f)(4) during each implementation period.
   iv. The permittee shall submit a semiannual compliance certification that work practices were implemented, if applicable.
c. Revisions to the work practice plan shall be made according to 40 CFR 63.306 (d).
d. Pursuant to 40 CFR 63.309 (g), compliance with the work practice emission control plan requirements shall be determined by the Division based on a review of records and inspections.

6. AK Steel shall maintain files of all information specified in 40 CFR 63.311 (f), Reporting and Record keeping Requirements, for 5 years per Condition 2. of SECTION F, in a permanent form suitable for onsite inspection for at least 1 year and thereafter accessible to the Division within 3 working days.

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

7. Copies of the work practice plan and startup, shutdown, and malfunction plan shall be kept onsite at all times. [40 CFR 63.311 (f), Reporting and Record keeping Requirements]

8. AK Steel shall submit all notifications, reports, and certifications required under 40 CFR 63.311, Reporting and Record keeping Requirements, to the Division for Air Quality's Ashland Regional Office.

9. **Semi-annual Coke Oven Battery Compliance Certification**
AK Steel shall certify compliance semiannually for the coke oven batteries for the 6-month periods ending May 15 and November 15 of each year to the Division for Air Quality's Ashland Regional Office and the U.S. EPA in accordance with the following requirements. The report should certify that:

a. No coke oven gas was vented except through the bypass/bleeder stack flare system during the 6-month reporting period, or that a venting report has been submitted;
b. A startup, shutdown, or malfunction event did not occur during the 6-month reporting period, or that a startup, shutdown, or malfunction event did occur and a report was submitted; and
c. Work practices were implemented if applicable.

10. Annual fuel use limitations shall be based on the fuel use during any consecutive 12-month period.

11. Only gaseous fuels may be combusted in the boilers.

12. Nitrogen oxide emissions from the Thermal Oxidizer shall not exceed 8 lbs/hr.

13. AK Steel shall submit semiannual reports pursuant to 40 CFR 61.138 (f), Record keeping and Reporting Requirements. These reports are required to be submitted to the Ashland Regional Office and U.S. EPA, Region IV by January 31 and July 31 after the end of the six-month calendar period.

14. **Furnace Coke Byproducts Recovery Area Work Practice and Control Requirements**

a. All bleed or pressure release relief vents from the nitrogen blanketing system, other than the emergency pressure relief devices, shall discharge back into the by-products plant.
b. The exhaust from the light oil condenser shall discharge back into the by-products plant, the output coke oven gas from the plant, a flare, or other combustion system.
c. Pursuant to 40 CFR 61.12(c) , the permittee shall maintain and operate each affected source that is subject to NESHAP, including associated equipment for air pollution control, in a manner consistent with good air pollution control practice for minimizing emissions.

SECTION E -SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5) and 40 CFR 63.110 (a), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F – MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b (IV)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b(IV) 2 and 1a(8) of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

   Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Section 1b(V)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:

   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.

   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.

8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7. above) to the Regional Office listed on the front of this permit within 30 days. Deviations from permit requirements, including those previously reported under F.7 above, shall be included in the semiannual report required by F.6 [Section 1b (V) 3, 4. of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:

   a. Identification of the term or condition;

   b. Compliance status of each term or condition of the permit;

   c. Whether compliance was continuous or intermittent;

   d. The method used for determining the compliance status for the source, currently and over the reporting period.

   e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

   f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following addresses:

Division for Air Quality	U.S. EPA Region 4
Ashland Regional Office	Air Enforcement Branch
1550 Wolohan Drive, Suite 1	Atlanta Federal Center
Ashland, KY 41102-8942	61 Forsyth St.
	Atlanta, GA 30303-8960

   Division for Air Quality
   Central Files
   803 Schenkel Lane
   Frankfort, KY 40601

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.

11. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

SECTION G - GENERAL PROVISIONS

1. **General Compliance Requirements**

a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 and of the Clean Air Act and is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a, 3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].

b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a, 6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:

(1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;

(2) The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;

(3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Section 1a, 7,8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

e. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

f. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a, 14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

g. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a, 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

h. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens. [Section 1a, 15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

i. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a, 10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

j. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].

k. This permit does not convey property rights or exclusive privileges [Section 1a, 9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

l. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Environmental and Public Protection or any other federal, state, or local agency.

m. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].

n. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].

o. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

SECTION G - GENERAL PROVISIONS (CONTINUED)

p. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of issuance. Compliance with the conditions of a permit shall be considered compliance with:
(1) Applicable requirements that are included and specifically identified in the permit and
(2) Non-applicable requirements expressly identified in this permit.

q. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.

2. **Permit Expiration and Reapplication Requirements**

a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020 Section 8(2)].

3. **Permit Revisions**

a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)

4. **Construction, Start-Up, and Initial Compliance Demonstration Requirements**

None

5. **Acid Rain Program Requirements**

a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

6. **Emergency Provisions**

a. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:

(1) An emergency occurred and the permittee can identify the cause of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and

(4) Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.

(5) This requirement does not relieve the source of other local, state or federal notification requirements.

b. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

7. **Risk Management Provisions**

a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

RMP Reporting Center

P.O. Box 1515

Lanham-Seabrook, MD 20703-1515.

b. If requested, submit additional relevant information to the Division or the U.S. EPA.

8. **Ozone Depleting Substances**

a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:

(1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.

(2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.

(3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166

(5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.

(6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners.*

SECTION H - ALTERNATE OPERATING SCENARIOS

None

SECTION I - COMPLIANCE SCHEDULE

None